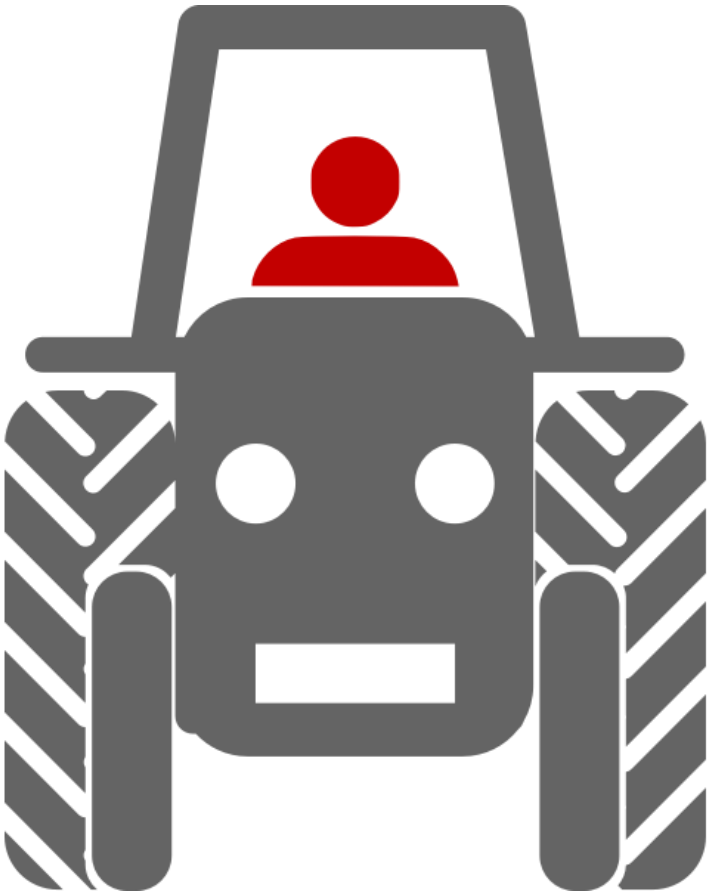
Machinery Management Program

Dial in your true cost

and better manage your equipment

Equipment is often the first or second-largest line-item expense, and usually the most misunderstood and mis-managed. Use this resource to improve long-term strategy, sustainability, and accurate cost per acre for your farming or equipment operation.



Key Objectives

1. Understanding Your Current Position
    a. Appraisal
    b. Net Equity
    c. Expenses

2. Make the Unknowns, Known
    a. Inflation and Appreciation
    b. True Depreciation
    c. Hour Tracking

3. Develop a Plan
    a. 3-5 Year Equipment Outlook
    b. Margin Enhancement
    c. Knowing **Your** Numbers
        i. University Numbers vs. Reality
        ii. Calculating Your Rates
        iii. Cost Per Bushel

4. Future Decision-Making
    a. Return on Assets
    b. Trends Analysis
    c. Hour and Time Tracking

5. Communication and Collaboration
    a. Meetings
    b. Roles and Responsibilities
        i. Decision Rights
    c. Accountability Chart
    d. Annual Review

Understanding Your Current Position

Most farms and businesses make trades for three reasons:

1. Something is worn out
2. The dealer approached them with a 'good deal'
3. Tax Management

The goal with the enclosed information is to better understand your current equipment standing, and build a plan for what it needs to look like in the future. This requires better communication, more tracking, and a different perspective on how you've managed equipment in the past.

I'll mention right now- if you're not willing to do a little more work, or change the way you manage equipment, just put this information down and walk away. This is not the business plan for you. Proper Equipment Management requires discipline, extra work, and an affinity to change. The operators that understand how to best manage equipment expenses, know their costs, and communicate effectively with their team and equipment dealer resources in the next five to ten years, are the operators that will have survived and continue to thrive in twenty to thirty years.

A saying we use often when working with farm operations is "You can be happy or you can be *informed*." The issue of equipment management does not inherently lie in the cost or factors out of our control. It lies in how we manage our numbers, accept accountability of the decisions we make, and develop plans in time of abundance and shortage.

Our goal here is to map out where we're at, look at the direction we want to steer the business, and then build a bridge to get there.

Questions you should be able to answer after utilizing and implementing the resources in this handout:

- What is your Equipment Cost/Acre?
- What is your Equipment Cost/Bushel?
- What is the market value of all of your equipment?
- What Capital Expenditures are you making in the next 3-5 years?
- How many hours does it take to put the crop in and take the crop out, or complete a project?
- What is your Return on Asset in your farm or business?
- Who handles key equipment decisions?
- How do you effectively communicate and manage "wants, needs, wishes"?
- What data points do you use to evaluate equipment efficiency and management?

Equipment Appraisal

Equipment Appraisal Proven Process

Purpose: Develop an accurate equipment valuation and understand net equity position by assessing true market values of equipment. This will help dial in Cost of Production on Machinery and Equipment to a per acre and per pass basis. It also helps to develop better relationships with dealers.

1. **Identify-** Identify two local dealerships to conduct appraisals of your equipment. While you most likely have a dealer you have been working with for a long time, the second opinion is important for two reasons. First, it is a good check on whether you are getting the best value from your current dealer. As machines are regarded as power units and have trade-in or sale value, color of equipment is not all that relevant. Second, equipment prices can be very regional. Checking with a dealer in a different area may provide different insight on significant trade-in differences based on inventory of the dealer, etc.

2. **Compile-** Compile a list of every piece of farm equipment for every operation involved. Whether in Transition, Collaboration, or Profit Management, it is important to account for all equipment to paint the best picture of the operation(s) today. The primary focus is on machines used for primary farming purposes; planting, crop care, and harvesting. However, it is good to have a market value sheet of all equipment assets that contribute to the operations.

3. **Appraise-** Reach out to the identified equipment appraisers at dealerships or otherwise, and explain to them you want an equipment appraisal.
    a. **The most important part** for them to understand is that you want a true valuation. As in, if you walked in the day, week, or month after they do the appraisal and put the keys on their desk, they would write you a check for the amount on the appraisal This will get their attention- make sure it is very clear. This develops accountability and exposes relationships with dealers.
    b. The appraisal typically does not cost anything. This should be a service provided by the dealer. Explain it to dealers you traditionally may not have done business with as an evaluation on how a fleet change or equipment lineup adjustment might look on your farm. It could be well worth their time and effort.

4. **Implement-** Average the two appraisal values for a "true" market value. Dialing in the true cost of production, as well as using the information for forward projecting and equipment analysis, is the entire reason for this process. Utilize the information and implement it into your decision-making process.

5. **Frequency-** Equipment appraisals should be conducted on an annual basis, and again when looking to make a change in equipment throughout the year. This helps to maintain dealer relationships, keeps equipment information current, and allows you to have a pulse on true value of machinery. Putting this information into a year over year tracker allows you to evaluate depreciation, forward project equipment lifetime and value, and make cuts or additions as necessary.

Appraisals should not just be for sales, trade-ins, and estate planning. The appraisal is an important picture of knowing your assets, managing equipment cost, and actively making changes in the operation. It may take a bit of coaching and explaining with your dealership. Focus on the primary units, and explain to them that this will be a key part of your operation as you move forward.

Net Equity

Assets – Liabilities = Net Equity

Why is Net Equity important? Primarily for understanding how leveraged you are in your assets, debt repayment capacity, and evaluating transition planning, collaboration, and gifting.

The good news? You just had an appraisal done!

The bad news? The market value of the machinery is probably not worth as much as you would like it to be, even in years of retained value in used equipment. Thanks a lot, depreciation…

The perspective on your Net Equity position is also part of the *awareness* in managing your equipment moving forward. Have you ever heard the saying "You can't improve what you don't measure?" Of course you have. It's true. Knowing these numbers are an important measurement in your equipment fleet.

Equipment Net Equity						
Equipment Name	Machinery Description	Year	Asset Value	Liability (debt)	Net Equity	**Notes**
ex: Combine	John Deere 790	2022	$ 530,000.00	$ 415,000.00	$ 115,000.00	Bought New
Corn Head	C16F	2022	$ 220,000.00	$ 130,000.00	$ 90,000.00	Folding, $100000 trade in value
Grain Head	MD40	2014	$ 30,000.00	$ -	$ 30,000.00	Improved Bushel Retention in soybeans
Tractor	9620RX	2018	$ 395,000.00	$ 140,300.00	$ 254,700.00	Primary Tillage
Tractor	8370RT	2019	$ 300,000.00	$ 130,000.00	$ 170,000.00	Planter, Grain Cart
Tractor	9570RT	2021	$ 450,000.00	$ 100,000.00	$ 350,000.00	Fiel Cultivate, Joker
Grain Cart	J&M	2014	$ 65,000.00	$ -	$ 65,000.00	Needs Replaced in 2023
Planter	DB80	2020	$ 320,000.00	$ -	$ 320,000.00	Run through 2026
Drill	S9435	2005	$ 60,000.00	$ -	$ 60,000.00	Cover Crops, Custom Beans
Anhydrous Bar	Case 950 24RW	2008	$ 40,000.00	$ -	$ 40,000.00	Needs Replaced in 2023
Vertical Till	Horsch Joker	2012	$ 35,000.00	$ -	$ 35,000.00	
Chisel	Case 875	2009	$ 25,000.00	$ -	$ 25,000.00	Too expensive to upgrade in 2021
Strip Till	Kuhn-Krause 16	2017	$ 200,000.00	$ 15,500.00	$ 184,500.00	Maintenance
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
					$ -	
		Total	$ 2,670,000.00	$ 930,800.00	$ 1,739,200.00	
				Total Equity:	$ 1,739,200.00	
				Debt:Asset	0.35	

Expenses

Quick, what do you write a check for on seed last year?! Most of you can probably come pretty close to what your actual number is. Now, if we ask the same thing on your total equipment costs, do you know what that is? You might get close, but you'd probably be guessing more than anything. Very rarely do farm operations take the time to understand true costs in their equipment and machinery analysis.

I will tangent here for a minute to put in a word on separating businesses into separate entities. Equipment field use is very different than semi and trucking costs. It is also very different from crop protection and input purchasing and grain selling. One thing highly effective farm business do is know their true cost of operating by segregating entities. This often includes separating equipment into a company, trucking into a company, and allowing payroll and input purchasing to lie with an individual or a separate management part of the business. It is more checkbooks, but it is the same amount of transactional bookkeeping, and is actually much cleaner on the accounting side. It allows you to truly know what your costs are. If you have more questions on this, please reach out to us! But, I digress.

Back to knowing your expenses! Key things to look for when understanding your expenses:

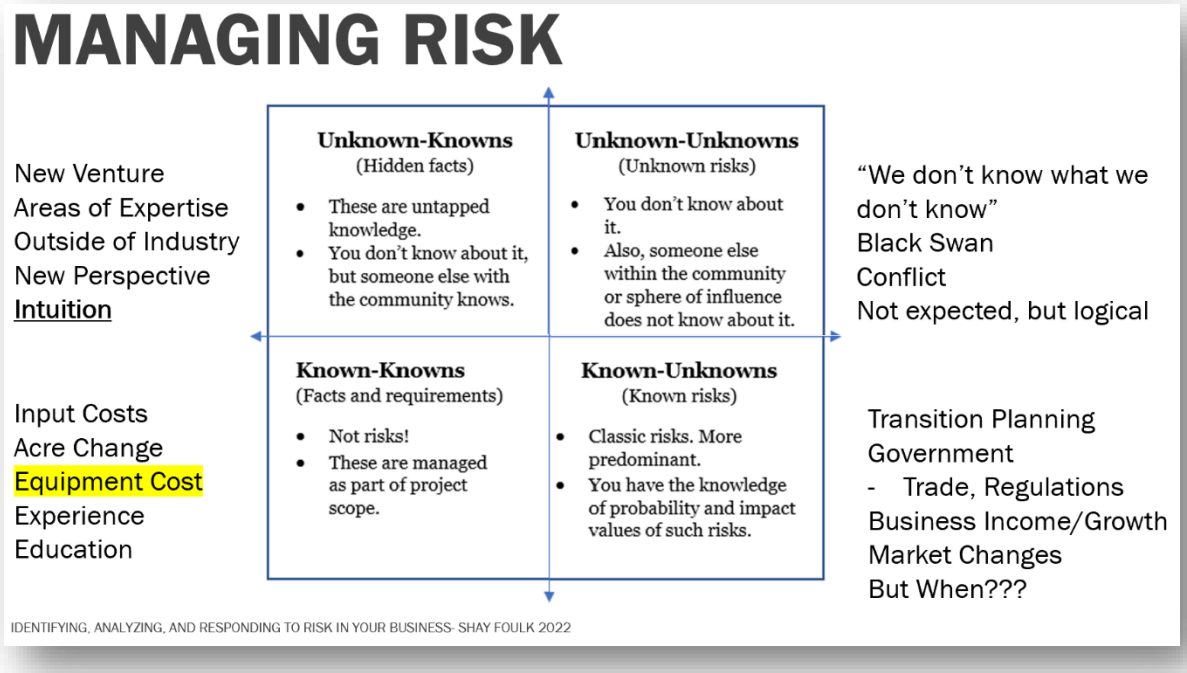
1. Maintenance
2. Repairs
3. Labor
4. Insurance
5. Lease
6. Principal and Interest Payments
7. Fuel and Oil
8. Subscriptions
9. Travel/Road Use
10. Other

These should all be expenses tied to equipment and machinery ONLY. Not trucks, semi, grain site, building repair, pickups… just the equipment you use for growing, removing, and managing a crop. Knowing your expenses, paired with your equipment rates (which we will get to later), will help you understand the cash flow of the machinery, and ensure you are managing equipment appropriately

Equipment Pass	Rate + Return	Year/Description	Acres	Total
Chisel	$18.24	Case	2700	$49,248.00
Sprayer	$7.00	Hardi/Mark	16000	$112,000.00
Planter	$22.00	16 Row	4700	$103,400.00
Nitrogen- 230	$6.00	Tractor Only	2400	$14,400.00
Harvest	$54.00	12 Row 680	4700	$253,800.00
Field Cultivator	$14.00	30'	3500	$49,000.00
Strip Till	$29.83	16 RW	1500	$44,745.00
Drill	$11.64	40' Sunflower	2500	29100
				0
				0
				0
				0
				0
				0
				0
				0
				0
		Total Farm Acres	1350	
		Total Rate Income		$655,693.00
		Total Anticipated Cost		$512,167.00
		Final Working Capital		$143,526.00

	Annual/Projected Cost
Fuel	$40,000.00
Maintenance	$20,000.00
Repairs	$30,000.00
Labor	$80,000.00
Principal Pay.	$232,000.00
Insurance	$15,000.00
Lease	$83,000.00
Other	$12,167.00
	$512,167.00

Make the Unknowns, Known



With Equipment Management, many of us lie in the Known-Unknowns category. This means that we *know* that we don't know our equipment cost like we should. The information in this packet, and in this section, is to help us move our equipment cost into the Known-Knowns- these are the things we *know we know*. This allows us to better manage risk, and understand how equipment impacts our farm operation more critically. We will start by analyzing **appreciation, inflation, and depreciation**- things we don't write a check for every year, but that we will write a check for when we go to replace or trade machinery.

Depreciation, Appreciation, and Inflation Calculator

		Depreciation	**$34,000**	**$34,000**	**$34,000**	**$34,000**	**$34,000**
		Inflation	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**
	# of Years	**Total Annual**	**$44,000**	**$44,000**	**$44,000**	**$44,000**	**$44,000**
	5	***Example of a purchase and a trade after 5 years.***					
Dep.	$170,000	TIME	Year 1	Year 2	Year 3	Year 4	Year 5
Inflation	$50,000	Original Equipment Purchase Price	**$300,000**	Depreciation / Inflation			**$350,000** **Replacement of same machine.**
Cost/Yr.	$44,000						**$130,000** **Salvage value of original machine.**
Total Cost	$220,000					5 yr example	
		Inflationary replacement cost increase					$50,000
		Market value depreciation					$170,000
		Actual Cost of operation to stay current:					**$220,000**
		Chart Example: Produced by Ag View Solutions					

This example indicates a $300,000 planter decision. That same planter equivalent will be worth $350,000 in 5 years at 3% inflation, and salvage value will be around $130,000 at 15% Depreciation and Inflation

(Work in Progress! If you've made it this far, send me an email at shay@agviewolutions.com with the Subject "Finished Machinery Analysis Handout" and I will get it to you by 01 March 2022. Sometimes farm planning just leaves me short on time!)