



**COOPERATIVE EXTENSION**  
*College of Agriculture, Forestry and Life Sciences*

## FINANCIAL PRIMER – BROWN FAMILY FARMS

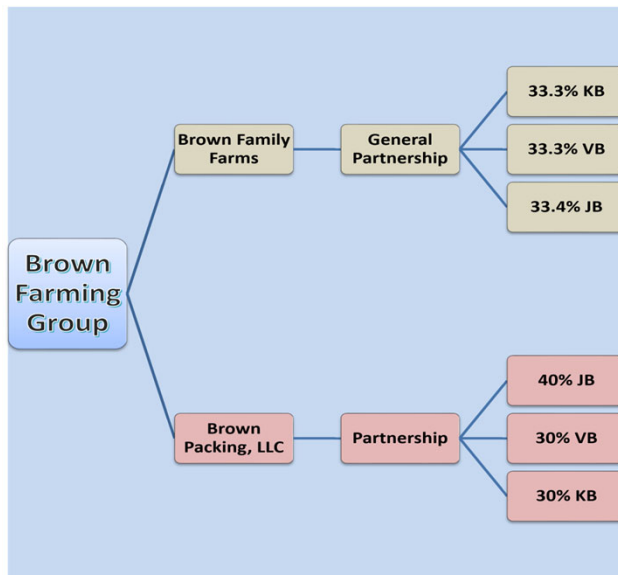
### 2023 EXECUTIVE FARM MANAGEMENT

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“**Strategic planning** is...  
 an organization's process of defining its strategy, or direction,  
 and making decisions on allocating its resources to pursue this strategy.”

## Finance

*A branch of economics concerned with resource allocation as well as resource management, acquisition and investment.*

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## Ag Finance:

What do you want to know?

**Income Tax Reporting?**

**Financing?**

**Financial Performance?**

Whole Business

Crop/Enterprise

Field by Field?

**Analyze business strengths/opportunities?**

**Planning?**

Estate Tax Planning

Retirement Planning

Transition Planning



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# Financial Analysis

## Financial Position

Total resources controlled by a business and total claims against those resources, at a single point in time.

- Capacity of business to withstand risk.
- Benchmark for measuring results of future business decisions

## Financial Performance

Results of production and financial decisions, over one or more periods of time.

- Includes impact of external forces beyond control
- Results of decisions made in ordinary course of business

Source: FFSC-Financial Guidelines for Agriculture. January 2015 III-1

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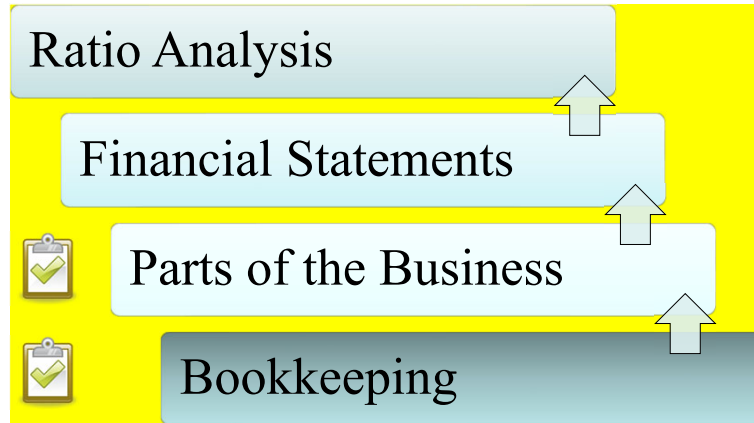
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RATIO ANALYSIS			Business Plan			
January 1, 2022			1	2	3	4
<b>Crop Revenue</b>			\$2,804,493	\$2,125,645	\$2,025,645	\$1,107,645
<b>Profitability</b>						
EBITDA →	Operating Profit	Income - Operating Expenses	\$1,078,848	-\$400,000	\$300,000	(\$618,000)
	Return on Assets (ROA)	(NFIFO + Interest - FL) / Assets	23.0%	3.2%	-0.6%	-57.5%
	Return on Equity (ROE)	(NFIFO - FL) / Equity	27.4%	2.1%	-3.3%	-105.6%
<b>Efficiency</b>						
	Operating Efficiency	Operating Profit / Income	35%	17%	13%	-47%
	Asset Turnover (Capital Eff)	Income / Assets	91%	88%	88%	51%
<b>Liquidity</b>						
	Current Ratio	Current Assets / Current Liabilities	562%	377%	350%	100%
	Working Capital Sufficiency	Working Capital / Expenses	88%	53%	45%	0%
		Working Capital / Income	56%	44%	41%	0%
<b>Solvency</b>						
	Debt to Asset Ratio	Liabilities / Assets	21%	26%	27%	43%
	Equity to Asset Ratio	Owner Equity/Assets	79%	74%	73%	57%
	Debt to Income	Total Debt / NFIFO	79%	340%	663%	NA
<b>Repayment Ability</b>						
	Term Debt Coverage	Op Profit - FL / Debt Service	749%	183%	100%	-665%
<b>Operating Profit Allocation</b>						
	Family Living & Taxes	Family Living / OP	15%	41%	55%	NA
	Debt Service	Interest + Principal / OP	13%	30%	40%	NA
	Equity Growth	Change in Cash / OP	72%	29%	5%	NA

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## Financial Analysis Process



PROFILE

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## Financial Statements

### Balance Sheets

**Financial Position** on a certain date

**Cost Basis** statements list asset values at their original cost, less depreciation.

**Fair Market Value** statements list assets at a price that they will likely sell for in a competitive market

Which one is better?

EOY Balance Sheet			
ASSETS		LIABILITIES	
Cash		A/P	
A/R		Operating Loans	
Inventory		Accrued Interest	
PP		Accrued Taxes	
		Prin Due < 12 Mo	
Total CA		Total CL	
Brdg Lvstk		Prin Due > 12 Mo	
Equipment			
Land			
Total NCA		Total NCL	
		Total Liabilities	
		Owner Equity	←
Total Assets		Liab & Equity	

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Income Statement					
Income	Quantity	Price	Amount	Expense	Amount
Com, OC	143,855 bu.	8.15/bu.	876,295	Seed and plants	551,849
Com, NC	147,345 bu.	7.49/bu.	1,103,014	Fertilizer	1,284,268
Other, OC	500,000 lb.	0.95/lb.	475,000	Crop chemicals	759,778
Other, NC	413,700 lb.	1.99/lb.	833,282	Crop insurance	78,950
Pig Cullers, NC	23,875 cwt.	18.15/cwt.	433,146	Drying expense	407,124
Peanut, NC	2,031,500 lb.	0.26/lb.	528,190	Storage	70,000
Soybeans, NC	15,400 bu.	14.28/bu.	219,120	Irrigation energy	144,850
Sunrise Squash, NC	39,800 bu.	11.03/bu.	439,094	Crop Custom Hire	139,347
Sw Potatoes, OC	231,600 ton.	9.90/ton.	2,294,800	Crop Hauling and trucking	191,177
Sw Potatoes, NC	50,800 ton.	8.75/ton.	444,500	Crop Consultants	37,500
P27 Tobacco, NC	600,000 lb.	1.91/lb.	1,146,900	Crop Marketing	173,216
Crop government payments			5,000	Interest	238,859
Other government payments			10,000	Supplies	161,558
Custom work income			37,500	Fuel & Oil	289,335
Patronage dividends cash			8,625	Repairs	527,544
Crop insurance income			287,470	Wages/Labor	2,213,070
				Land rent	263,560
				Personal property taxes	78,384
				Farm insurance	123,114
				Utilities	128,775
				Dues & professional fees	86,948
Gross cash income			8,884,528	Total cash expense	7,736,821
				Net cash income	1,147,707
Inventory Changes	Beginning Inventory	Purchases/Deposits	Sales/Withdrawals	Ending Inventory	Inventory Change
Prepays and supplies	68,053	-	190,315	82,362	-122,262
Accounts receivable	63,177	-	2,880	2,880	-50,427
Holding gains or losses	69,690	-	47,500	68,700	87,300
Crops and feed	3,009,883	-	3,009,642	3,009,642	-404,241
Other assets	25,450	-	-	62,400	-
Accounts payable	157,750	-	-	55,000	66,750
Accrued interest	27,462	-	-	31,770	-4,308
Total inventory change					-419,734
Net operating profit					727,871
Depreciation	Beginning Inventory	Purchases	Sales	Ending Inventory	Depreciation
Machinery and equipment	638,940	275,000	-	582,500	-303,540
Trucks/vehicles	-	-	-	-	-
Buildings and improvement	-	-	-	-	-
Total depreciation					-303,540
Net farm income					397,331

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# Financial Statements

## Statement of Cash Flows

Summarizes cash activity for all parts of business -- Operations, Assets, Liabilities, and Equity

### Financial Position or Performance?

## Projected Cash Flow Summary

Total operating inflow		9,571,517
Total operating outflow	(-)	7,680,969
Capital purchases	(-)	-
Capital sales	(+)	-
New credit	(+)	520,000
Loan payments	(-)	809,010
Net cash flow	(=)	1,601,538
Beginning cash balance	(+)	359,452
Operating loan borrowings	(+)	2,038,063
Operating loan principal payments	(-)	3,649,052
Ending cash balance	(=)	350,000
Beginning operating loan balance		1,811,089
Peak operating loan balance (May)		3,244,727
Ending operating loan balance		200,099

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## Financial Statements

### Statement of Owner Equity

Reports changes in owner equity  
Earned versus valuation

### Financial Position or Performance?

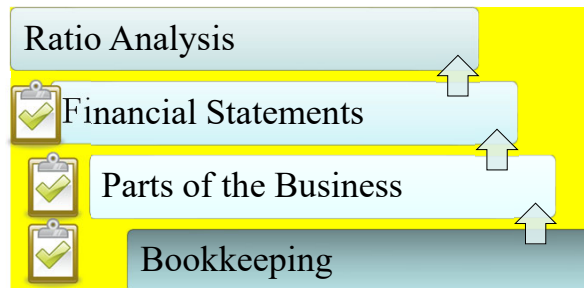
#### Projected Earned Net Worth Change

Net farm income		293,941
Owner withdrawals	(-)	375,000
Income taxes accrued	(-)	-
Earned net worth change	(=)	-81,059

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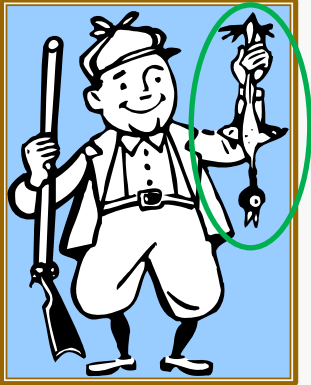
## Financial Analysis Process



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# WHO IS FLOID?



<b>What if Revenue is</b>	<b>= \$1,000,000</b>
<b>F</b> amily <b>L</b> iving & taxes	<b>\$100,000</b>
<b>O</b> perating expenses	<b>\$600,000</b>
<b>I</b> nterest	<b>\$70,000</b>
<b>D</b> ebt (principal)	<b>\$130,000</b>
<b>asset Growth of</b>	<b>\$100,000</b>

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# EBITDA

100

- 60

= 40

Revenue

- Operating

= EBITDA

Crop & Livestock

Other - G, CW, P, R

Direct

Overhead

**Family Living**  
10

**Interest**  
10

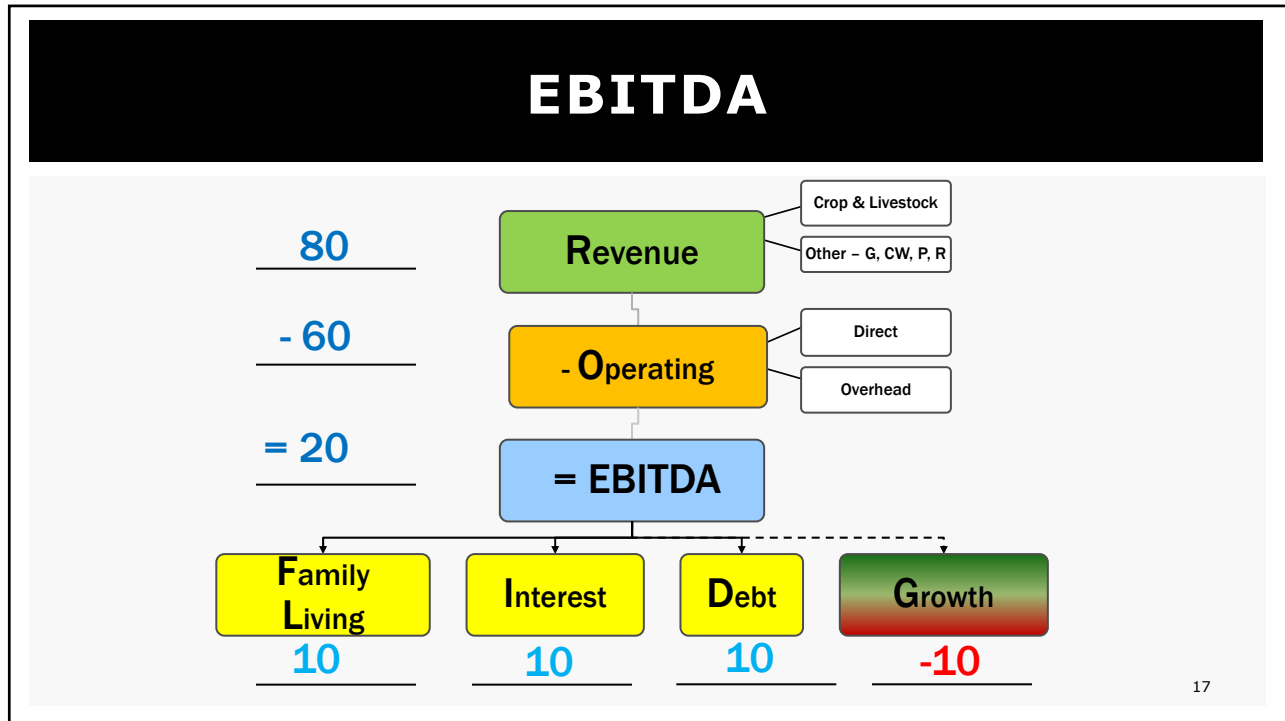
**Debt**  
10

**Growth**  
10

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## Known Knowns

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Side by Side Analysis
Brown Family Farms - Oper

Financial:						
	2018	2019	2020	2021	2022	2023P
<b>EBITDA SUPPLY &amp; DEMAND</b>						
Revenue	8,220,443	8,359,627	7,989,006	9,261,336	8,307,087	-
- Operating Expenses	7,704,912	7,671,546	6,430,092	7,094,939	7,335,950	-
<b>= EBITDA (Supply)</b>	<b>515,533</b>	<b>688,081</b>	<b>1,558,914</b>	<b>2,166,397</b>	<b>971,137</b>	-
<b>EBITDA Uses:</b>						
Family Living & taxes	260,000	287,450	312,500	325,000	350,000	-
+ Interest expense	187,836	194,915	303,629	283,719	243,267	-
+ term Debt due (BOY)	346,704	364,462	363,779	263,434	245,790	-
<b>= EBITDA Uses (Demand)</b>	<b>794,540</b>	<b>846,827</b>	<b>979,908</b>	<b>872,153</b>	<b>839,057</b>	-
<b>= Available for Asset GROWTH</b>	<b>(279,007)</b>	<b>(158,746)</b>	<b>579,006</b>	<b>1,294,244</b>	<b>132,080</b>	-
<b>BALANCE SHEET</b>						
	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023P
Total Current Assets	2,849,602	2,062,400	3,201,922	4,211,071	3,616,839	-
Total Assets	8,035,252	7,404,300	8,669,486	9,797,309	9,297,414	-
Total Current Liabilities	3,120,247	2,588,007	3,098,806	3,002,223	2,271,696	-
Total Liabilities	3,726,495	3,210,476	3,732,213	3,756,184	3,059,081	-
Owner Equity	4,308,757	4,193,824	4,937,273	6,041,125	6,238,333	-

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## Known Knowns



OTHER INFORMATION	2018	2019	2020	2021	2022	2023P
Crop Govt Payments	1,300	191,352	601,902	119,424	5,000	-
Crop Insurance Income	38,000	73,000	157,500	-	287,470	-
Change in LOC Balance	391,725	(390,371)	606,614	(104,747)	(104,747)	-
Operating Interest	117,099	141,936	201,194	243,888	204,478	-
Term Debt Payments (P&I)	417,441	417,441	466,214	301,260	284,379	-
Depreciation	350,800	234,000	349,285	646,875	330,540	-
Cash On Hand	248,352	378,367	212,045	401,008	359,432	-

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## Analyze the Business

1. Profitability
2. Efficiency
3. Liquidity
4. Solvency
5. Repayment Capacity




- Sensitivity Analysis
- Trends are important!
- Business structure
- Business goals

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## Known Knowns


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KEY FINANCIAL RATIOS	2018	2019	2020	2021	2022	2023P	Formulas
Current Equity (Working Capital)	(270,645)	(525,607)	103,116	1,208,848	1,345,143		Current Assets – Current Liabilities
Net Farm Income	(23,103)	239,166	906,000	1,235,803	397,330		Government Payment/EBITDA
Government Payment/EBITDA	0.3%	27.8%	38.6%	5.5%	0.5%		Current Equity / Operating Expenses
Working Capital Sufficiency	-3.5%	-6.9%	1.6%	17.0%	18.3%		Cash / Current Assets
Cash to Current Assets	9%	18%	7%	10%	10%		Current Equity / Term Debt Payments
WC Burn Rate: Debt Service	(0.6)	(1.3)	0.2	4.0	4.7		Owner Equity / Total Assets
Equity to Asset Ratio:	54%	57%	57%	62%	67%		Non Current Liabilities / EBITDA
Debt Efficiency	1.18	0.90	0.41	0.35	0.81		EBITDA / Revenue
EBITDA Efficiency	6%	8%	20%	23%	12%		Revenue / Total Assets
Asset Turnover	102%	113%	92%	95%	89%		(EBITDA - FL - Deprec) / Total Assets
Rate of Return on Assets	-1%	2%	10%	12%	3%		Family Living / EBITDA
Family Living Withdrawals	50%	42%	20%	15%	36%		(EBITDA-FL-Op Inv) / Term Debt Payment (P&I)
Term Debt Coverage Ratio	33%	62%	224%	530%	146%		

2023P—Projected results for year ending 12/31/23

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## Known Knowns


**COOPERATIVE EXTENSION**  
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Side by Side Analysis

Financial Dashboard

Brown Family Farms - Oper

Practice:	Vulnerable	Resilient	Agile	2018	2019	2020	2021	2022	2023 Projected
	7 EBITDA Efficiency <small>Formula: EBITDA / Revenue</small>	< 15 %	15 – 30 %	> 30 %	6%	8%	20%	23%	12%

### FINANCIAL EFFICIENCY

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## EFFICIENCY IMPACTS

- EBITDA Goal = \$1,000,000
- EBITDA Sufficiency = EBITDA/Revenue

EBITDA	\$1,000,000	\$1,000,000	\$1,000,000
EBITDA Sufficiency	20%	30%	40%
Revenue Requirement	\$5,000,000	\$3,333,333	\$2,500,000

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### Side by Side Analysis      Financial Dashboard

Brown Family Farms - Oper

Practice:	Vulnerable	Resilient	Agile	2018	2019	2020	2021	2022	2023 Projected
1 Working Capital Sufficiency	< 10 %	10 – 25 %	> 25 %	-3.5%	-6.9%	1.6%	17.0%	18.3%	
Formula: (Current Assets – Current Liabilities) / Operating Expenses									
2 Cash to Current Assets	< 5 %	5 – 15 %	> 15 %	8.7%	18.3%	6.6%	9.5%	9.9%	
Formula: Cash / Total Current Assets									
3 WC Burn Rate: Debt Service	< 1:1	1:1 – 5:1	> 5:1	(0.6)	(1.3)	0.2	4.0	4.7	
Formula: Working Capital / Term Debt Payments									

**LIQUIDITY**
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Side by Side Analysis

Financial Dashboard

Brown Family Farms - Oper

Practice:	Vulnerable	Resilient	Agile	2018	2019	2020	2021	2022	2023 Projected
4 Equity to Asset Ratio:	< 40 %	40 – 70 %	> 70 %	54%	57%	57%	62%	67%	
Formula: Total Equity / Total Assets									
<b>SOLVENCY</b>									
6 Debt Efficiency	> 6:1	3:1 – 6:1	< 3:1	1.18	0.90	0.41	0.35	0.81	
Formula: Term Debt / EBITDA									
<b>FINANCIAL EFFICIENCY</b>									
8 Asset Turnover	< 30 %	30 – 70 %	> 70 %	102%	113%	92%	95%	89%	
Formula: Revenue / Total Assets									
<b>FINANCIAL EFFICIENCY</b>									

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## ASSET TURNOVER

- **Hog Integrator**

- Asset -- "Gilt" worth \$300
- Revenue -- Gilt 2 litters of 10 pigs @ \$175
- $ATO = \frac{2 * 10 * 175}{\$300} = \frac{\$3500}{\$300} = \mathbf{11.7}$

- **Producer**

- Asset -- Building \$125,000 per 1000 head
- Revenue - \$12 / head
- $ATO = \frac{\$12}{125k/1000/2X} = \frac{\$12}{\$62} = \mathbf{.20}$


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# LAND ASSET TURNOVER

Crop Revenue		
Land value / Acre		
ATO		

**When you “buy” a “rented” acre,  
Does Revenue change?**

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**COOPERATIVE EXTENSION**  
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## Side by Side Analysis      Financial Dashboard

Brown Family Farms - Oper

Practice:	<i>Vulnerable</i>	<i>Resilient</i>	<i>Agile</i>	2018	2019	2020	2021	2022	2023 Projected
9 Rate of Return on Assets <small>Formula: <math>\frac{(EBITDA - FL - Deprec)}{Total Assets}</math></small>	< 2 %	2 – 8 %	> 8 %	-1%	2%	10%	12%	3%	
<b>PROFITABILITY</b>									
10 Family Living Withdrawals <small>Formula: FL / EBITDA</small>	> 25 %	15 – 25 %	< 15 %	50%	42%	20%	15%	36%	
<b>CAPACITY</b>									
11 Term Debt Coverage Ratio <small>Formula: <math>\frac{(EBITDA - FL - Op Int)}{Term Debt Payment (P\&amp;I)}</math></small>	< 110 %	110 – 125 %	> 125 %	33%	62%	224%	530%	146%	
<b>REPAYMENT CAPACITY</b>									

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**Side by Side Analysis**

**Financial Dashboard**

Brown Family Farms - Oper

**Practice:**

Vulnerable Resilient Agile

2018 2019 2020 2021 2022 **2023 Projected**

5	Core Equity Burn Rate	< 3:1	3:1 – 7: 1	> 7:1			
Formula: Excess Reserves / (EBITDA - FL - Interest - Debt payments)				Assume loss of			-\$200,000
	Assets	12/31/2022 Market Value	Loan Max	Borrowing Capacity	RE Liability 12/31/2022	Excess Reserve	Burn Rate
	Real Estate & Buildings	1,750,000	70%	1,225,000	-	1,225,000	6.1 years
	Real Estate & Buildings (20% Drop)	1,400,000	70%	980,000	-	980,000	4.9 years
* Real estate is primary core asset in todays economy.				<b>CAPACITY</b>			

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**Action Plans**

Brown Family Farms - Oper

**EBITDA Improvement Plan**

Metric: Vulnerable Resilient Agile

EBITDA Efficiency < 15 % 15 – 30 % > 30 %

Revenue Strategies:

	2022	% of Revenue
Revenue	8,307,087	100%
- Operating	7,335,950	88%
= EBITDA	971,137	12%
<b>2023 EBITDA Goal &gt;</b>	<b>1,386,491</b>	<b>17%</b>

EBITDA CHANGE Needed: **415,354**

Expense Strategies:

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**Action Plans**

**Brown Family Farms - Oper**

Working Capital Improvement Plan			
Metric:	Vulnerable	Resilient	Agile
Working Capital Sufficiency	< 10 %	10 – 25 %	> 25 %
<u>2022</u>		Family Living Strategies:	
Current Assets	3,616,839		
- Current Liabilities	2,271,696		
= Working Capital	1,345,143		
/ Operating Expenses	7,335,950	18%	
<b>2023 WC Goal is</b>	1,467,190	20%	
WORKING CAPITAL CHANGE:	122,047		
WC Burn Rate: Debt Service	< 1:1	1:1 – 5: 1	> 5:1
Working Capital		Liability Strategies:	
1,345,143			
/ Term Debt Payments	284,579	4.73	
<b>2023 WC Goal is</b>	1,422,895	5.00	
WORKING CAPITAL CHANGE:	77,752		