



Managing a Farm with Diverse Crops and Markets

Scott Thellman
PFI - 2019

About Me

- Owner of Juniper Hill Farms, LLC
- 2014 graduate of ISU
 - Agricultural Business
 - Agronomy
 - Agricultural Entrepreneurship
- Agricultural Entrepreneur
- Interests in post harvest handling, marketing, storage, and distribution of local and regional foods.



Background

- Raised in Lawrence, Kansas.
- Moved with family to rural Douglas County, Kansas in 1999.
- Became interested in agriculture as a kid.
- Began working at different agricultural operations in my area as a teenager.
 - Sweet corn, vegetables, cattle, row crops



Background

- Became interested in starting my own farm.
- Purchased some old hay equipment with savings from summer jobs.
- Baled 15 acres of hay in 2006, and sold it quickly.
- Saw my opportunity to enter into farming!



Background

- Expanded hay operations throughout high school.
- Graduated high school in 2009, and produced 10,000 small square bales that summer.
- Entered into vegetable operations in 2010 with the construction of our first high tunnel.
- Started schooling at Iowa State in the fall of 2010.



Background

- Constructed second high tunnel in 2011, and grew on one acre.
 - Primarily marketed crops at farmers market's.
- Expanded to two acres of vegetables in 2012, and focused on direct sale to grocers and restaurants.
- Partial USDA Organic Certification of farm in 2012.
- Increased hay production to 500 acres.



Background

- Operation continued to expand slowly throughout college.
- Graduated Iowa State in 2014.
- Expanded to 4 Acres Organic vegetables in 2014.
- Hay acreage grew to 600 acres in 2014.
- After graduation from college, farm started rapid growth period.



Today we...

- Produce over 1,500 acres of hay, alfalfa, small grains, and row crops.
 - 2,750 round bales and 3,000 square bales in 2018.
- Grow 50 acres of vegetables
 - 20 USDA Certified Organic, 30 Conventional in vegetable production.
 - Serving 21 grocery stores, 20 restaurants, 2 school districts, various wholesalers, and other markets.
- Provide agricultural consulting services, hay and vegetable brokering services, and custom hire services to over 75 customers around the region.



2011

**1/4
Acre**

2012

1 Acre

2013

2 Acres

2014

5 Acres

2015

18 Acres

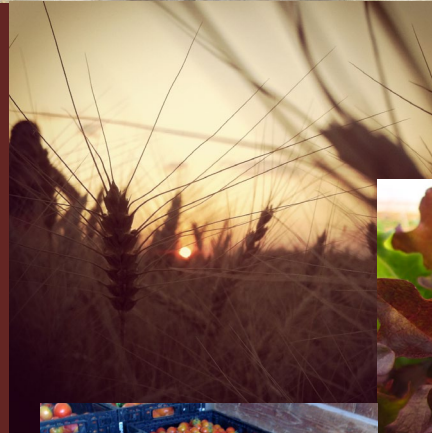
2018

50 Acres



Crops We Grow

- Hay and Forage
- Small grains and row crops
- Hops
- 2018 Vegetables
 - Leaf Lettuce, Spinach, Kale, Chard, Beets, Potatoes, Watermelon, Pumpkins, Sweet Corn, Carrots, Cilantro, Basil, Napa Cabbage, Bok Choi, Winter Squash, Head Lettuce, Turnips, Radishes, and more!



How did I make farming my
full time career?



By diversifying my operation
into a variety of enterprises!



Enterprise – Vegetables (1)

- Certified Organic
 - 20 Acres
 - Leaf Lettuce, greens, squash, tomatoes, peppers
 - HIGH DOLLAR, LOWER VOLUME SPECIALITY CROPS
- Conventional
 - 30 Acres
 - Pumpkins, watermelon, winter squash, sweet corn
 - LOWER DOLLAR, HIGH VOLUME SPECIALITY CROPS.



Enterprise – Hay (2)

- A Variety of production
 - 400 Acres (mostly all CV)
 - Brome, Prairie, Mixed Grass, Alfalfa, Sorghum Sudan grass, Wheat Straw, and Corn Stalks
 - Round Bales and Square bales
 - Primary Market = Local and regional hay buyers



Enterprise – Row Crops (3)

- Both Organic and Conventional
 - Approximately 100 Acres
 - Non-GMO
 - Nothing against GMO's, just higher revenue per acre.
 - Organic Heirloom Wheat
 - Turkey Red
 - Organic Popcorn
 - Trial was great!



Enterprise – Custom Hire (4)

- Over 1100 acres in custom hire operations.
 - Primarily custom hay
 - Tillage
 - Mowing
 - Planting (specialty crop)
 - Soil sampling
 - Agronomic recommendations
 - Distribution on Reefer Truck



Enterprise – Vegetable Brokering (5)

- Starter in 2016
- Some would call a “food hub”
- Brokering for growers in Missouri and Kansas.
 - CV Veg, Fruit, and Berries
- Providing additional products to our truck, and additional value to our customers.
- Supports and strengthens the regional food system



Enterprise – Hay Brokering (6)

- Started in 2017
- Supports and strengthens my customers feeding abilities, and keeps them coming back!



Why All of These Enterprises?



Diversifying Risk!



Diversifying Risk!

- Multiple enterprises helps you to balance out the good and the bad on your overall year end P&L.
- When one enterprise does not perform well, others will, helping you recover the lost revenue from the poor performing enterprise(s).



Play Into the Strengths of Your Operation!

Take the pros of your operation, and expand on them.



Example 1

- We purchased a reefer truck in 2014 to better distribute our food.

PROBLEM: Hit a slow summer sales season in 2016, and could not justify running truck.

SOLUTION: Start to carry other growers product on our truck!



Example 1

OUTCOME: We now distribute for six vegetable growers, two tree fruit farms, and one berry grower.

- Turned a money losing piece of equipment into a quarter million dollar enterprise in three years!



Example 2

- We sold much of our hay to regional buyers 2015-2016 as there was a glut of hay in our area.
 - Needed to break even on the enterprise, so we shipped south.
 - PERK: Made a bunch of connections around the region with forage.



Example 2

PROBLEM: 2017 was short, and 2018 was a horrible drought year for our region.

- Hay yields were down 40-60% across the board.

SOLUTION: We connected with old customers and shipped hay north to meet our customers needs.

- Kept them in business!



Example 3

PROBLEM: Largest vegetable customer went bankrupt in fall of 2017.

- No notice to vendors
- SHUT DOWN
- What were we going to do?
- How were we going to come up with new market?



Example 3

SOLUTION: Become a equipment broker!

- Buy their equipment and expand our operation and others in the region with the infrastructure purchased!
- New infrastructure allowed us to increase our cold chain capacity and enter into new markets!
 - Made up for lost revenue and then some!



Example 4

PROBLEM: We need more plasticulture in our operation.

- We have struggled with high dollar crops due to unpredictable weather.
- Have exited various vegetable crop enterprises because of risk associated, which has caused us to loose market share (slicer tomatoes)
- Hightunnels are great, but can be expensive to build...



Example 4

SOLUTION: Buy a HayGrove!

- Found a grower getting out of wholesale tomato business.
- Purchased 91,800sqft of HayGrove for a fraction of the new price.
 - Reconfigured the structure to allow for four season growing (49,894sqft)
- Kept the harvest crew, and turned them into the construction crew.
 - Helped to keep the great employees around.
- Now we have over an acre of hightunnels!



2018: A year of bleh...

- Profitable year for JHF even though...
 - Hail storm destroyed 6 acres of high dollar organic crops
 - Leafy greens, chard, Napa, cut lettuce.
 - Severe drought
 - Lower hay yields by 40%-60%
 - Stunted summer and stalled fall vegetable crops
 - Early Freeze
 - Wiped out fall winter squash crop.
 - Over 15 acres abandoned.
 - Removal of season extension for expansion.



2018 - An Example From Our Farm

- By combining profits and losses from each enterprise, JHF was still able to achieve a 14% net profit margin, even though we had the worst year we had ever had weather wise since we started farming!
- Banker loved to hear this!!



2018 was still a profitable year because we diversified our risk!

- Enterprises that made money in 2018:
 - Hay (prices are high)
 - Vegetable Brokerage and Distribution
 - Hay Brokerage and Distribution
- All business we hope to grow in the future to help diversify risk.
- Enterprises that lost money in 2018:
 - Vegetables
 - Row Crops
 - Custom Hire operations
- None of these operations will cease in 2019, but we will look at how we can make them stronger.



So... How do you diversify your
operation?



Diversifying Your Operation

- Look at what you are doing now.
 - What are your strengths?
 - What assets do you have that are not paying for themselves?
 - Can you leverage those assets in a new enterprise?
 - Are there services in the area that are lacking?
 - Do you have skills or assets that could be used to provide that service?
 - Do your customers want more products from a single source?
 - Can you become the ‘one stop shop’ for your customers needs?



Diversification Does Come with Challenges



Challenges

- How do you keep track of it all?
 - We struggled with enterprises that grew quickly
 - Increased record keeping, food traceability, cold chain preservation, training.
 - We also struggled to get enterprises that grew slowly off of the ground.
 - Poor planning or lack of time to really dedicate to launching the enterprise.



Challenges

- Can you manage the new logistics associated with a new enterprise?
 - Do you need new insurance?
 - Do you need new record keeping devices?
 - How do you schedule the enterprise into the rest of your operation?



Challenges

- Starting a new enterprise is not cheap, even if you have most of the assets already!
 - Can you show a profitable enterprise in a three year capital budget plan? (ROI)
 - Does your banker think you can take on additional projects? (D:A Ratio)
 - Are you willing to dump time and money into something that may only offer a slight benefit to the operation?



Benefits

- Could a new enterprise compliment or enhance an existing enterprise?
 - Justify expanding equipment?
 - Adding new markets?’
 - Allow you to take that next step in food safety or scale?



Hard Decisions

Some enterprises just fall into place.

AND...

It does not always make sense on paper to start a new agricultural enterprise. (That's why they call us farmers!)

HOWEVER...

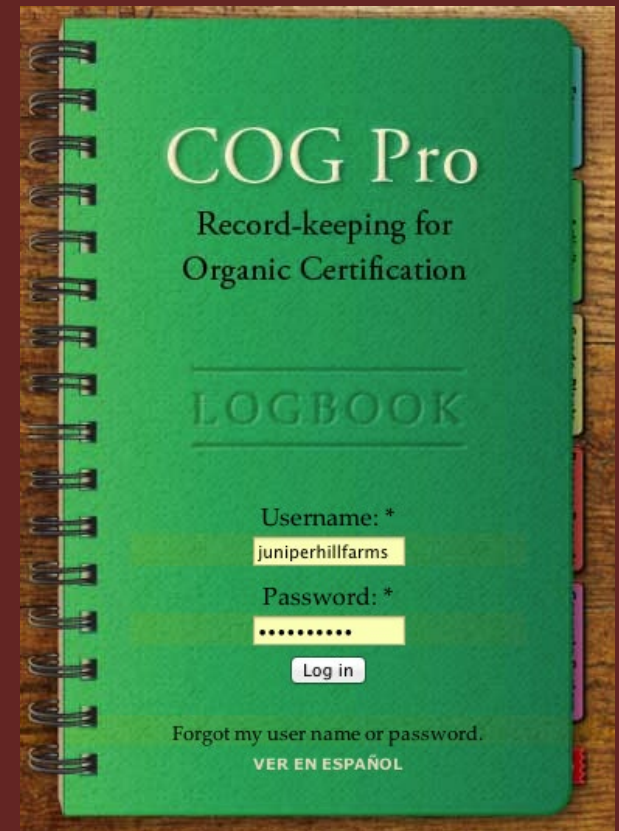
If it can benefit your operation in the long run, maybe it is worth the risk.

The decision is never easy, and you will almost always regret it!!
(Usually in a good way though)



Record Keeping Resources

- AgSquared – Crop Planning
- COG PRO – Organic Record Keeping
- Quickbooks - Accounting, sales, expenses
- Excel
- Employee journals
- Additional Record Template examples available (ask me)





June 14th, 2011



Budgeting Resources

- Iowa State University Ag Decision Maker (AGDM) –
 - Templates for all types of crops, including vegetables and high-tunnel templates.
 - <http://www.extension.iastate.edu/agdm/>
- Kansas State University Enterprise Budgets
- Excel (easy to make)
- ‘The Organic Farmer’s Business Handbook’ – Richard Wiswall
- ‘Wholesale Success’ (4th edition) – Jim Slama & Atina Diffley



Juniper Hill Farms, LLC
2016 Cash Flow Budget – Normal Year Operating

5/19/2016

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Income													
Hay													
Brome Round						8,500.00	8,500.00						17,000.00
Brome Square						6,000.00							6,000.00
Grass Round						3,000.00	3,000.00						6,000.00
Alfalfa Round					900.00	750.00							1,650.00
Alfalfa Square					200.00	1,500.00	1,750.00	1,750.00	900.00				6,100.00
Straw Round							1,000.00						1,000.00
Straw Square							5,000.00						5,000.00
Grains													
Corn (Non-GMO)										10,692.00			10,692.00
Wheat (Red Winter)							1,890.00						1,890.00
Vegetables Production Income													
Fresh Market Sales	0.00	0.00	0.00	1,763.00	10,000.00	15,000.00	22,000.00	27,500.00	40,000.00	35,000.00	30,000.00	15,000.00	196,263.00
Custom Hire Work													0.00
Hay						3,000.00	15,000.00	14,000.00	1,650.00				33,650.00
Other			300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00		2,700.00
Other Income													0.00
Deivery/Tranport	200.00	400.00	200.00	200.00	500.00	500.00	500.00	1,000.00	750.00	500.00	500.00	175.00	5,425.00
Equipment Rental			100.00			250.00	250.00					1,100.00	1,700.00
Government Payments									150.00	1,277.00			1,427.00
Misc Income	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	1,200.00
Total Income	300.00	500.00	700.00	2,363.00	12,000.00	38,900.00	59,290.00	44,650.00	43,850.00	47,869.00	30,900.00	16,375.00	297,697.00



Misc Income	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	1,200.00	
Total Income	300.00	500.00	700.00	2,363.00	12,000.00	38,900.00	59,290.00	44,650.00	43,850.00	47,869.00	30,900.00	16,375.00	297,697.00	
Expenses														
Vegetable Production Expenses													0.00	
Car and Truck Expenses	550.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	2,200.00	
Chemicals Purchased	550.00			1,000.00		1,100.00		1,000.00					3,650.00	
Custom Hire and Contract Labor			250.00	300.00	500.00	500.00	500.00	500.00	500.00	1,100.00	250.00	4,400.00		
Fertilizers and Lime	300.00	53,700.00		500.00	4,000.00	1,000.00	500.00	750.00	1,200.00	0.00	1,200.00	63,150.00		
Freight and Trucking	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	3,600.00	
Gasoline/Fuel/Oil	262.69	232.73	500.00	2,600.00	600.00	1,250.00	2,000.00	2,000.00	1,750.00	1,250.00	1,250.00	1,000.00	14,695.42	
Insurance	2,930.75			2,930.75		2,930.75		2,930.75			2,930.75		11,723.00	
Payroll Expenses	2,500.00	2,750.00	2,750.00	3,500.00	4,000.00	6,500.00	7,500.00	500.00	8,500.00	8,000.00	7,000.00	3,500.00	57,000.00	
Owner Income	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	14,400.00	
Equipment Rental	546.11	546.11	546.11	546.11							750.00	750.00	750.00	4,434.44
Packhouse Supplies	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	2,400.00	
Packaging			2,000.00	5,000.00	500.00	4,000.00	5,000.00		1,400.00				17,900.00	
Utilities	100.00	100.00	500.00	1,200.00	500.00	500.00	500.00	750.00	750.00	100.00	100.00	100.00	5,200.00	
Rent Expense (Land)				3,500.00			500.00		3,250.00	6,000.00		13,250.00		
Repairs and Maintenance	2,100.00	760.00	250.00	450.00	300.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	7,360.00	
Seeds and Plants Purchased	0.00	6,629.75	3,631.07	3,096.23	1,750.00	2,000.00					17,107.05			
Twine/Netwrap						500.00							500.00	
Office Supplies	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	900.00	
Meals and Entertainment	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	900.00	
Property Tax											600.00	360.00	960.00	
Sales Tax	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	480.00	
Tags and Licenses	396.00						200.00						596.00	
Professional Fees	997.36	296.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	2,293.36	
Short Term Notes Payable													0.00	
JDFinance Acct						3,250.00							3,250.00	



Property Tax													
Sales Tax	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	480.00
Tags and Licenses	396.00						200.00						596.00
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Short Term Notes Payable													0.00
JDFinance Acct						3,250.00							3,250.00
Long Term Notes Payable													0.00
Mid-America Refi Term Loan												1,937.00	1,937.00
JD 569	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	6,752.52
JD 946	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	4,361.16
JD 6125R						1,206.00	1,206.00	1,206.00	1,206.00				4,824.00
CIH TR320							875.00	875.00	875.00	875.00	875.00	875.00	5,250.00
Mid-America Land Loan					2,061.14				2,061.14				4,122.28
FSA Land Loan					2,688.95							2,688.95	5,377.90
Total Expenses	10,568.30	14,280.73	70,674.07	23,758.48	20,966.23	26,302.89	16,847.14	17,647.14	28,989.03	15,641.14	21,591.14	17,707.84	284,974.13

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Total Income	300.00	500.00	700.00	2,363.00	12,000.00	38,900.00	59,290.00	44,650.00	43,850.00	47,869.00	30,900.00	16,375.00	297,697.00
Total Expenses	10,568.30	14,280.73	70,674.07	23,758.48	20,966.23	26,302.89	16,847.14	17,647.14	28,989.03	15,641.14	21,591.14	17,707.84	284,974.13
Net Income	-10,268.30	-13,780.73	-69,974.07	-21,395.48	-8,966.23	12,597.11	42,442.86	27,002.86	14,860.97	32,227.86	9,308.86	-1,332.84	12,722.87
Operating Balance	4,300.00	7,700.00	30,400.00	74,200.00	83,500.00	71,000.00	52,000.00	44,800.00	50,000.00	15,000.00	10,000.00	5,000.00	
Operating Loan Interest Expense	16.13	28.88	114.00	278.25	313.13	266.25	195.00	168.00	187.50	56.25	37.50	18.75	1,679.63
Net Income After OL Interest Exp													11,043.25



Property Tax													
Sales Tax	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	480.00
Tags and Licenses	396.00						200.00						596.00
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JD 569	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	562.71	6,752.52
JD 946	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	363.43	4,361.16
JD 6125R						1,206.00	1,206.00	1,206.00	1,206.00				4,824.00
CIH TR320							875.00	875.00	875.00	875.00	875.00	875.00	5,250.00
Mid-America Land Loan					2,061.14				2,061.14				4,122.28
FSA Land Loan					2,688.95							2,688.95	5,377.90
Total Expenses	10,568.30	14,280.73	70,674.07	23,758.48	20,966.23	26,302.89	16,847.14	17,647.14	28,989.03	15,641.14	21,591.14	17,707.84	284,974.13

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Net Income	-10,268.30	-13,780.73	-69,974.07	-21,395.48	-8,966.23	12,597.11	42,442.86	27,002.86	14,860.97	32,227.86	9,308.86	-1,332.84	12,722.87
Operating Balance	4,300.00	7,700.00	30,400.00	74,200.00	83,500.00	71,000.00	52,000.00	44,800.00	50,000.00	15,000.00	10,000.00	5,000.00	
Operating Loan Interest Expense	16.13	28.88	114.00	278.25	313.13	266.25	195.00	168.00	187.50	56.25	37.50	18.75	1,679.63
Net Income After OL Interest Exp													11,043.25

