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Horticulture Research

Whole Farm Financial Project Year 2 - An Analysis of 2014 Financials

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Cooperators:

- **12 PFI Fruit and Vegetable Producers**

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In a Nutshell

- 12 fruit and vegetable farms provided a profit-loss statement and simple balance sheet for 2014.
- Four of the 12 are meeting their personal expectations for profitability.
- Seven of the participating farms also provided data for Year 1 (2013)
- Number of years farming as a business ranged from 1 – 35 years.
- The range (difference between highest and lowest reported values) is large for many aggregated categories. Averages (and medians) with large ranges associated should not be used as benchmark values.
- No two farm financial strategies or situations are the same. This report serves as a starting point for profitability conversations, and for farmers to compare their own numbers with their peers.
- For six farms whose largest market was Summer CSA, they earned, on average, 68 percent of their total revenue through Summer CSA.
- All participating farms had debt to asset ratios <0.62.
- Net income ratios among farms ranged from -0.11 to 0.83.
- Gross income per acre ranged from $3,020 to $30,191.
- The conclusion of the report includes reflections from four participating farmers on their numbers, financial strategy, and using this report.

Introduction

Enthusiasm for local fruits and vegetables continues to grow among consumers, the media and farmers. Little attention has been paid to the bottom line of the local foods movement: How does a beginning farmer build a successful business? Are Iowa fruits and vegetable farms currently making a profit? Can a farm generate profit raising only fruits and vegetables? What do successful fruit and vegetable farm financials look like?

To help answer these questions, Practical Farmers of Iowa began the Whole Farm Financial project in 2014. Eleven fruit and vegetable producers in Practical Farmers of Iowa's membership contributed their financial statements from 2013 to be aggregated and published. The resulting report was Year 1 of the Whole Farm Financial Project. This time, 12 farmers, including seven returning participants and five new participants, submitted their 2014 farm financial data for the analysis.

The goal of this report is to provide a starting point for conversation about the profit potential of fruit and vegetable farms, and to provide farmers in planning stages a look at the financials of a sample of existing farms. The farm financials in this report are intended to be illustrative and educational. Such a small dataset should not be used as benchmarks, nor taken as a reflection of all diversified fruit and vegetables farms.

This report cannot be used as a blueprint for farm financial success. This report will be immediately useful to farmers with a few years of financial numbers of their own to compare. For beginning and aspiring farmers, this report can show them which ratios to begin tracking, and what level of revenue, and costs, may be reasonable to expect.

When deciding the methods for this project, several previous reports were used, and may be of interest to other farmers and researchers. Farmer members have found Hendrickson (2005) particularly informative for farm business comparison. Several reports from Iowa State University were employed to evaluate farm business health (Chase, 2012, Plastina et al., 2014, Edwards, 2014), as well as reports from other universities (Blonde, 2009), Practical Farmers of Iowa (1999) and "Fearless Farm Finances" by Padgham et al. (2012).

The conclusion of this report includes reflections from four of the participating farmers, on their farm, their finances, and using this report. While some of the financial information in this report is rather dense, **Table 4** is similar to a balance sheet and is a good starting place for those less familiar with financial ratios. Similarly, **Table 5** and **Table 7** are aggregated balance sheets, by size of farm and level of farm assets, respectively.

Data Collection and Reporting

For this report, farmers were asked to complete a Schedule F tax form that was modified to include a more detailed breakdown of revenue, a simple balance sheet of equity and liabilities, and a 13-question survey (**Appendix 1**). To preserve anonymity of the farms, the data is reported by categorical aggregation or by transforming data into common financial ratios and per acre values.

Data from the twelve farms were aggregated and transformed for reporting in the following ways:

- Financial ratios by farm (each farm is identified by an alphabet letter to preserve anonymity)
- Acres in fruits and vegetables (<1-3 acres [*n* = 6], 4-17 acres [*n* = 6])
- Total assets (<$40,000 [*n* = 4]; $100,000-250,000 [*n* = 4]; >$250,000 [*n* = 4])

Farm Ratios

Financial ratios can help expose weaknesses and strengths in a farm business. Over time, ratios and benchmarks can be used to set goals that drive short-term financial decision-making. Nine ratios and benchmarks were selected for use in this study. Broadly, they speak to solvency, profitability, and financial efficiency. Liabilities and equity were reported as short term (due in <1 year), intermediate (>1-10 years), or long-term (>10 year). **Table 1** shows the ratios and benchmarks calculated and the formulas used.

Table 1

Farm Financial Ratios & Benchmarks

Ratios and Benchmarks	Formula Used	Description
Current ratio	$= \frac{\text{current equity}}{\text{current liability}}$	Measure of solvency; ability of owner to pay existing debts.
Debt to asset ratio *	$= \frac{\text{total farm liabilities}}{\text{total farm assets}}$	Measure of solvency; percent of total assets financed by loans
Rate of return on farm assets *	$= \frac{\text{(net farm income + other interest expense + mortgage interest expense)}}{\text{total farm assets}}$	Measure of profitability; "interest rate" earned on farm investments
Rate of return on farm assets * (with forced return to farmer) **	$= \frac{\text{(net farm income + other \& mortgage interest expense – return to farmer)}}{\text{total farm assets}}$	Measure of profitability; "interest rate" earned on farm investments (including $ returns to the farmer)
Operating profit margin	$= \frac{\text{(net farm income + mortgage interest expense + other interest expense)}}{\text{gross revenue}}$	Measure of profitability; operating efficiency of the farm
Operating profit margin (with forced return to farmer) **	$= \frac{\text{(net farm income + mortgage \& other interest expense - return to farmer)}}{\text{gross revenue}}$	Measure of profitability; operating efficiency of the farm (including $ returns to the farmer)
Asset turnover ratio *	$= \frac{\text{gross revenue}}{\text{total farm assets}}$	Measure of efficiency; efficiency in using capital (assets)
Operating expense/revenue ratio	$= \frac{\text{(total operating expense – interest expense – depreciation expense)}}{\text{gross revenue}}$	Measure of efficiency; portion of revenue supporting operating expenses
Depreciation expense ratio	$= \frac{\text{depreciation expense}}{\text{gross revenue}}$	Measure of efficiency; portion of revenue supporting depreciation expenses
Interest expense ratio	$= \frac{\text{interest expense}}{\text{gross revenue}}$	Measure of efficiency; portion of revenue supporting interest expenses
Net income ratio	$= \frac{\text{net income}}{\text{gross revenue}}$	Measure of efficiency; return for unpaid labor and management

* If farmers included the value of the home on the farmstead in the farm assets, the value of the home listed on the assessor's site was subtracted from the total assets for this calculation. This value (total assets - value of home) was used to calculate the Rate of Return on Farm Assets and the Asset Turnover Ratio. Because the value of the home could not be separated into debt and equity based on the information provided, values reported for liabilities and equity include the value of the home on three farms. This unadjusted value is used to calculate the Debt to Asset Ratio. This applied to three farms (A, B, D).

** The forced return to farmer of $6/hr was used in this calculation unless the reported return to the farmer was > $6/hr. The $6/hr return was imposed on six farms (F, G, L, N, O, P) in this report.

Overview of participating farms

Twelve Iowa farms participated in this study. Farmers were asked to participate not based on their perceived profitability, but by their willingness to share data for the benefit of others. The 12 farms all raise a diverse set of fruits and vegetables. Beyond that, they differ in many ways: some also raise livestock or field crops. Some farm on their own, while others farm with a spouse or family. Some have been farming only a few years, others are seasoned veterans. On the financial side, six are sole proprietorships, six are LLCs. Three farms' financials are organized so their house is included in the farm assets. Some started their farms slowly, easing in after prior careers or during existing careers; some others are all-in, and on their own, others are farming with family. Four of the 12 are meeting their expectations for profitability, eight are not, but all have plans in place to improve profitability in future years. Three farms currently get all their household income from the farm; these three are the only farms in the study with such a goal. Five farms have an eventual goal to derive 75-90 percent of their household income from the farm. Because fruit and vegetable farm business structures vary greatly, it is difficult to analyze farm profit without knowing all these details.

Table 2

Market Participation and Revenue Streams FY2013

	Category of Sales - Produce						Category of Sales - Other than Produce			
	Summer CSA	Fall/Winter CSA	Restaurant	Farmers Market	Wholesale	Other	Field Crops	Hay	Meat, Eggs, Dairy	Other
Total Sales (sum from all reporting farms)	$260,507	$83,698	$96,277	$203,352	$196,220	$82,440	-	$81,072	$145,368	$42,095
Number of Farms Reporting	8	9	6	9	7	7	-	2	6	3

Table 2 shows the market participation of farms in the study. Among the 12 farms participating in this study, the most popular produce markets for sales were Fall/Winter CSA and farmers markets (nine farms reported sales in each market). Summer CSA, however, had the largest volume of sales, and was the largest market for six of the farms. For these six farms, the percent of their total sales in Summer CSA ranged from 43 percent to 88 percent, with a six-farm average of 68 percent. Of the remaining six farms, two had their highest sales volume in Farmers Market (51 percent and 52 percent), one farm's was Other Produce (43 percent), one farm's was Meat, Eggs, and Dairy (28 percent), and one farm's was Other, in Other than Produce (32 percent). On average, farms had five revenue streams across both categories, and four revenue streams for produce alone.

Financial Ratios by Farm

Table 3 shows financial ratios for each farm for 2014, with averages, medians and benchmark values below. Green values indicate a favorable ratio, blue indicates stable, and red indicates an unfavorable ratio. Stability ranges were based on two farm financial publications: Blonde (2009) and Edwards (2014). While the benchmarks from these farm financial publications are not specifically for fruit and vegetable farms, they do serve as suitable references. Blonde (2009) reports "strong, stable" and "weak" ranges for financial ratios and benchmarks, though the type of farm is not specified. Edwards' (2014) benchmarks use a different approach. After grouping farms into three profitability categories (high, medium, low), ratio averages are reported for the high third and the low third. This does not provide ideal ratios like those provided by Blonde (2009), but allows for comparison. Edwards' benchmark values are also shown in **Tables 6** and **8**.

Solvency – debt to asset ratio

The debt to asset ratio is a measure of solvency: how a farm's assets compare to the farm's debt. In **Table 3, column 1,** all farms have low (favorable) or stable debt to asset ratios. Three farms (F, M, O) have a ratio of 0 because they carry no debt. No debt typically indicates a farmer preference for building a debt-free lifestyle; most farms (and individuals) carry some debt as they build their assets. The highest debt to asset ratio reported was 0.57 (Farm G). The average debt-to-asset ratio was 0.22, while the median was 0.13. According to Craig Chase, marketing and food systems program manager at Iowa State University, debt to asset ratio should stay below 0.60, and ideally stay below 0.30. Interestingly, the Ag Decision Maker reported that farms in the highest third of profitability had higher debt to asset ratios than did farms in the lowest third of profitability. This could be due to low interest rates, perhaps combined with farmers re-investing in business infrastructure rather than paying taxes on profit. Some debt can be beneficial as long as the rate of return on assets is larger than the interest paid on the debt.

Profitability – rate of return on farm assets, operating profit margin

Two profitability measures are shown in **Table 3**, **the rate of return (RoR) on farm assets (column 2)** and **the operating profit margin (column 4)**. The rate of return on farm assets shows how quickly the net worth of the farm is growing, or can be assessed similarly to an interest rate earned by the farm from farm assets. This ratio, like others relying on total farm assets, can be misleading because it is scale-dependent; farms with very low assets may have very high rates of return. For the 12 farms in this study, all except two (Farms N and P) show favorable or stable rates of return. For nine farms (Farms B, C, D, F, M, L, O, Q) the RoR on farm assets was greater than their interest expense; an indication of sound investing. However, the RoR on farm assets shifts dramatically when unpaid farmer-labor is calculated back into the financials (see calculation in Table 3 footnote). With farmer labor (unpaid owner labor) included, only four farms (Farms B, C, M, Q) maintained RoR on farm assets greater than or equal to their interest expense **(Table 3, column 3).**

Table 3

Farm Financial Ratios by Farm

Farm	Debt to asset ratio	Rate of Return (RoR) Farm Assets (as reported)	RoR Farm Assets (inc. return to farmer of $6/hr)*	Operating profit margin	Operating profit margin (inc. return to farmer of $6/hr)*	Current Ratio	Asset turnover ratio	Operating expense ratio	Depreciation expense ratio	Interest expense ratio	Net income ratio	Number years farming as a business	Goal percent of household income from farming	Current percent of household income from farming	Type of farm business	are you meeting your expectations for farm profitability?
A	0.06	0.16	0.00	0.52	0.01	4.18	0.32	0.47	0.03	0.01	0.49	11	80%	55%	Sole Prop	Yes
B	0.62	0.26	0.02	0.27	0.02	N/A	1.03	0.61	0.14	0.02	0.23	10	50%	45%	Sole Prop	No
C	0.20	0.06	0.06	0.10	0.10	N/A	0.57	0.81	0.08	0.02	0.08	11	100%	100%	LLC	Yes
D	0.22	0.01	-0.01	0.11	-0.26	5.00	0.06	0.73	0.16	0.00	0.11	12	75%	45%	Sole Prop	No
F	0.00	0.07	-0.40	0.12	-0.64	N/A	0.62	0.88	0.00	0.00	0.12	4	65%	9%	LLC	No
G	0.57	0.04	-0.18	0.07	-0.27	-0.22	0.70	0.83	0.10	0.05	0.01	10	90%	2%	Sole Prop	No
M	0.00	0.63	0.00	0.36	0.00	N/A	1.78	0.62	0.03	0.00	0.36	4	100%	100%	LLC	Yes
L	0.47	0.12	-0.06	0.20	-0.11	4.33	0.66	0.71	0.10	0.00	0.18	10	13%	13%	Sole Prop	Yes
N	0.45	-0.02	-0.12	-0.05	-0.37	N/A	0.32	0.84	0.21	0.06	-0.11	2	50%	0%	LLC	No
O	0.00	0.20	-0.66	0.10	-0.32	N/A	2.06	0.68	0.22	0.01	0.09	2	90%	20%	LLC	No
P	0.04	-0.11	-1.38	-0.06	-0.69	2.72	1.98	1.02	0.04	0.00	-0.06	1	0%	0%	LLC	No
Q	0.05	0.66	0.60	0.89	0.81	N/A	0.79	0.15	0.02	0.00	0.83	35	100%	100%	Sole Prop	No
Average	0.22	0.17	-0.18	0.22	-0.14	3.20	0.91	0.70	0.09	0.01	0.20	**9**	**68%**	**41%**		
Median	0.13	0.10	-0.04	0.12	-0.18	4.18	0.68	0.72	0.09	0.00	0.12	**10**	**78%**	**33%**		
Range	**0.62**	**0.77**	**1.97**	**0.95**	**1.50**	**5.22**	**2.00**	**0.87**	**0.22**	**0.06**	**0.94**	**34**	**100%**	**100%**		

Benchmark Values											
Kohl (Blonde mod. 2009)	strong	< 0.30	> 0.05	> 0.05	> 0.25	> 0.25	> 1.50	varies	<0.65	varies	<0.12	varies
	stable	0.30 - 0.70	0.01 - 0.05	0.01 - 0.05	0.10 - 0.25	0.10 - 0.25	1.00 - 1.50		0.65 - 0.80		0.12 - 0.20	
	weak	> 0.70	< 0.01	< 0.01	< 0.10	< 0.10	< 1.00		>0.80		>0.20	
Ag Decision Maker	High third	0.26	0.158	0.158	0.37	0.37	-	0.45	0.54	0.06	0.04	0.36
	Low third	0.21	0.029	0.029	0.13	0.13	-	0.28	0.71	0.1	0.05	0.14

* forced return to farmer of $6/hr was used in this calculation unless the reported return to the farmer was > $6/hr. The $6/hr return was imposed on five farms.

The **operating profit margin** is similar to the net income ratio; higher numbers are favorable. This number represents the efficiency of operational expenses to create a financial return, after accrual adjustments. Four farms (A, B, M, Q) show favorable margins (>0.25); five farms (C, D, F, L, O), along with the average (0.22) and median (0.12) farm values show stable margins, and three farms (G, N, P) show unfavorable margins (**Table 3, column 4**). Two of the farms with unfavorable margins have negative margins (P and N). Both farms reported they are not meeting their financial goals but have plans to improve their profitability. When we force a value for unpaid owner-labor into the financials, seven farms (D, F, G, L, N, O, P), along with the average and median farm values, have negative operating profit margins during 2014 (**Table 3, column 5**). None of those farms, however, are earning the majority of their household income from farming.

Efficiency – current ratio, asset turnover ratio, operating expense ratio, depreciation expense ratio, interest expense ratio, net farm income ratio

The last six ratios in **Table 3** highlight how efficiently the farm operates. First, the **current ratio** is a measure of a farm's ability to pay short-term debts with current assets. Seven farms (B, C, F, M, N, O, Q) report "N/A" for the current ratio because they have no current liabilities (**Table 3, column 6**). Of the remaining five, four farms (A, D, L, P) have favorable current ratios, with the average (3.20) and median (4.18) values doubling the suggested "strong" benchmark value (>1.50). The one farm (G) with an unfavorable ratio was facing a balloon payment on a loan and had outstanding accounts receivable at the time of reporting.

The **asset turnover ratio** indicates how efficiently the farm's assets are put to use; higher numbers are more favorable (**Table 3, column 7**). Chase recommends a minimum goal of 0.30, and a preferred goal of 0.45. Nine of the farms (B, C, F, G, M, L, O, P, Q) and the average and median for all 12 farms have very favorable asset turnover ratios, ranging from 0.57 – 2.06. Put another way, Farm O, with an asset turnover ratio of 2.06, brought in the value of their total assets twice over in gross revenue during 2014. To make assets appear so efficient, this farm likely had low assets, which may change over time and should be considered when setting goals and evaluating your own business structure and performance. The single farm that had a low asset turnover ratio (Farm D) had a large volume of farm assets.

The final four ratios, when summed, account for 100 percent of gross revenue. This set of ratios shows where revenue is allocated among expenses (operating, depreciation, and interest), and profit (net) (**Table 3, columns 8-11**). The **operating expense ratio (column 8)** is the proportion of revenue put toward operating expenses for the year. For these 12 farms, the average and median operating expense ratios are stable, at 0.70 (average) and 0.72 (median). Five farms (C, F, G, N, P) had operating expense ratios higher than recommended (>0.80), but four of those were within 0.01-0.04 of the recommended "stable" range (0.65-0.80).

The **depreciation expense ratio (column 9)** indicates how quickly a farm is acquiring or replacing capital assets. According to Chase, the depreciation expense ratio should not be more than 0.10. Eight of the farms (A, C, F, G, M, L, P, Q), along with the average and median of all farms, show strong (< 0.10) or stable (0.00-0.10) ratios for depreciation expense ratio, with the average and median at 0.09. This measure is highly variable by year, and will be higher during farm start-up and expansion. When the depreciation expense ratio is high, however, it is displacing operating expense and net income, which may lead the farmer to undervalue their labor. The **interest expense ratios (column 10)** are very favorable for all of the 12 farms, whose interest expense ratios do not exceed 0.06. As with depreciation expense ratio, Chase recommends the interest expense ratio not exceed 0.10.

The **net income ratio** is the portion of the revenue that returns to the farm as profit after adjustments. This is often used as a starting place for assessing business viability. Chase recommends a goal of 0.20 for net income ratio. For these 12 farms, net income ratio is generally low and quite variable, ranging from -0.11 to 0.83 with an average value of 0.20 (**column 11**). Several factors may contribute to this. Like all farms, the annual success of a fruit and vegetable farm can hinge on extreme weather events and conditions, and the risk of disease and pest outbreak is always present. There will be year-to-year variability; tracking the net income ratio over time will provide a better picture of business viability.

Furthermore, unlike commodity farms that can receive subsidies and subsidized crop insurance, fruit and vegetable farmers build higher risk into their business model so they can withstand lower-profit years. In 2015, insurance for diversified farms became available for the first time in Iowa (Risk Management Agency's Whole Farm Revenue Program). By October 2016, 18 farms in the state had purchased Whole Farm Revenue Program policies, but the number of commodities grown on each farm could only be discerned as "2-3+"; no further information for number of crops was given. It remains unclear how many fruit and vegetable farmers have purchased WFRP policies, if any.

Using data from the Iowa Farm Business Association, Iowa State University reported the net farm income ratio for farms with >$100,000 in revenue in 2013 (Plastina, 2014). From that report, net farm income ratio was 0.18 for high-profit farms, 0.13 for middle-profit farms, and 0.01 for low-profit farms – not too far from the 0.14 average for the fruit and vegetable farms in this study. Similarly, the 2014 summary of farm financials from Iowa State reported that the average net farm income ratio was 0.11, and had an average return to management of -$8,922 (Plastina and Johanns, 2015). For high-profit farms (sorted by return to management) in 2014, the average of reported net income ratios was 0.18; for middle-profit farms the average was 0.35, and for low-profit farms the average net income ratio was 0.00.

Per Acre by Farm

Because this dataset uses whole farm revenue and expenses, all acres earning income (not only acres planted to fruits and vegetables) are used in **Table 4** to calculate per acre revenue and expenses by farm. Total number of acres for each farm are not reported, nor are the number of acres each farm has planted to fruits and vegetables. In 2014, the 12 farms participating in this study had an average gross revenue of $16,660/acre, with a range of $28,080/acre. Average expenses per acre were $13,120/acre, leaving an average profit of $3,540/acre. Farms with over 50 percent of their acres earning income planted to fruits and vegetables (eight farms) netted an average of over $4,000/acre (gross revenue >$22,000/acre). Farms with less than 50 percent of their acres earning income planted to fruits and vegetables (four farms) netted on average $2,500/acre. Median net income per acre for these farms was only $300 (average gross ~$5,900/acre). The revenue and profit potential per acre of fruits and vegetables is enormous, but high labor costs, management demands, and affordable risk abatement are barriers to profitability. For land-limited farmers, however, raising fruits and vegetables is perhaps the best choice for making a living on a few acres.

Table 4

Revenue, Expenses, and Balance per Acre (All Acres Earning Income) by Farm for FY2014

Farm	Revenue per Acre ($)				Expenses per Acre ($)												Net farm profit (loss) ($)	Additional Questions		
	Produce	Other than produce	All Other	**Gross income**	Car & truck expenses	Custom hire	Depreciation & section 179	Gasoline, fuel, oil	Insurance (other than health)	Labor hired	Repairs & maintenance	Seeds and plants	Supplies	Utilities	Other Expenses	**Total expenses**		Number years farming as a business	Goal % of household income from farming	are you meeting your expectations for farm profitability?
A	20,661	1,115	1,100	22,876	1,380	75	591	101	566	3,516	133	908	1,385	455	2,518	11,628	11,248	11	80%	Yes
B	26,219	1,050	382	30,191	1,701	0	4,168	178	1,077	5,102	229	1,236	2,605	1,074	5,768	23,137	7,055	10	50%	No
C	2,237	766	17	3,020	201	23	247	45	60	735	41	216	85	98	1,013	2,765	255	11	100%	Yes
D	3,012	270	0	3,282	27	0	514	99	201	720	230	195	440	61	424	2,911	371	12	75%	No
F	18,414	350	996	19,760	1,120	0	0	750	751	3,385	0	1,569	4,367	1,170	4,338	17,450	2,310	4	65%	No
G	3,106	2,637	292	6,034	349	78	633	175	101	1,960	166	93	933	224	1,255	5,967	66	10	90%	No
M	31,100	0	0	31,100	250	853	840	222	755	6,891	146	1,843	3,170	923	4,099	19,990	11,110	4	100%	Yes
L	7,097	324	496	8,712	804	0	886	409	276	1,382	159	364	731	315	1,783	7,109	1,603	10	13%	Yes
N	27,551	8	67	27,626	3,553	0	5,771	42	700	0	450	2,452	4,030	9,763	3,992	30,752	(3,126)	2	50%	No
O	27,954	0	550	28,503	2,299	0	6,218	658	174	2,656	0	2,730	1,653	427	9,032	25,847	2,656	2	90%	No
P	7,468	0	48	7,535	981	0	297	151	213	496	360	1,449	2,318	160	1,542	7,968	(432)	1	0%	No
Q	6,848	4,321	117	11,285	0	0	184	219	48	253	88	167	30	66	865	1,920	9,365	35	100%	No
Average	15,139	903	339	16,660	1,055	86	1,696	254	410	2,258	167	1,102	1,812	1,228	3,052	13,120	3,540	9	68%	
Median	12,941	337	204	15,523	892	-	612	176	245	1,671	153	1,072	1,519	371	2,150	9,798	1,957	10	78%	
Range	28,863	4,321	1,100	28,080	3,553	853	6,218	708	1,029	6,891	450	2,637	4,337	9,702	8,609	28,832	14,374	34	100%	

Aggregated by Acres Planted to Fruits and Vegetables

Table 5 shows the average, median, and range values of the 12 farms when grouped by number of acres planted to fruits and vegetables. In the income section, there is a large difference in the average farmers market sales for the two groups; the average of 1-3 acre farms' farmers market sales was $3,484; while 4-17 acre farm values averaged $39,829. The difference between the categories was similar when looking at median values. Farmers market was the primary revenue stream for only one of the 12 farms; for six farms it was the second-highest revenue stream, after CSA, wholesale, restaurant, or other. For 11 of the farms, 80 percent or more of their revenue from fruits and vegetables came from only two categories of sales. As such, the large ranges seen for some categories of sales indicate that those categories represented a large portion of sales for some farms but not for others.

Average and median net farm profit was higher for farms with 4-17 acres in fruits and vegetables. Because farm businesses may be LLCs, sole proprietorships, or C-corporations, the role of net profit in farm viability differs by farm. The range of net profit is very, very large within both groups. This reinforces that profitability on diversified vegetable farms is highly variable, and is perhaps reflective of differences in growth strategy, uninsurable single-year crop failures, farm goals for profitability, and personal resources not reflected in financial statements.

The differences in depreciation and Section 179 expenses are also noteworthy. Though the average and median expenses for depreciation and Section 179 for the 4-17 acre farm group compared to the 1-3 acre farm group, the range among farms within each group was such so as to indicate high variability. Typically, the 4-17 acre farms had higher expenses in this category, but not always – some of the 1-3 acre farms invest heavily in infrastructure. Labor hired is the highest expense category for most farms. For farms with 1-3 acres in fruits and vegetables, in 2014 they spent an average of $5,269 for labor. Farms with 4-17 acres of fruits and vegetables spent an average of $20,635. The difference between the two groups' median values was similar to the difference between the averages.

The average and median expenses for supplies, taxes, and utilities were similar between 1-3 acre farms and 4-17 acre farms. For utilities, some efficiency may be lost at a smaller scale (i.e., the current utility use is out-sized for the current need) or they are investing in heat or light for season extension. However, the cost of some supplies and utilities are not acre-dependent, like office supplies, software, phones, etc.

Looking at the additional question data, the farms with 4-17 acres planted in fruits and vegetables also have more total acres earning income (hay, pasture, field crops, livestock, etc.) and income from farm products other than fruits and vegetables. The 1-3 acre farms tend to be beginning farmers (four of the five have farmed for less than four years). The beginning farmers participating in the study also allocated less of their expenses to labor. An average of 14 percent of total expenses for beginners went to labor, compared to 26 percent for more experienced farmers. Beginning farmers spent a larger percentage of their expenses on supplies (18 percent compared to 11 percent), had fewer acres earning income, and were more reliant on income from fruits and vegetables than experienced farmers. For beginners, 98 percent of total farm income was from fruits and vegetables; for experienced diversified farmers participating, the average percent of total farm income from fruits and vegetables was 79 percent.

Table 5

Balance Sheet, Data Aggregated by Fruit and Vegetable Acres for FY2014 ***(cont. on next page)***

12 farms were categorized based on their acreage planted to fruits and vegetables. The two categories are 1-3 acres (*n*=6) and 4 -17 acres (*n*=6). From these categories, the average, median, and range* for farm responses is reported below.			Average		Median		Range	
			1-3 ac	4 -17 ac	1-3 ac	4 -17 ac	1-3 ac	4 -17 ac
Farm Income ($)	Profit on livestock for resale		8	2,622	-	-	49	10,163
	Sales of livestock, produce, grains, and other products you raised		45,932	153,340	45,077	97,604	64,009	400,801
	Category of Sales - Produce	Early Season CSA	-	-	-	-	-	-
		Summer CSA	21,639	27,186	12,194	31,035	55,000	40,797
		Fall/Winter CSA	3,151	6,407	4,000	4,800	5,561	13,000
		Restaurant	10,217	14,371	1,964	2,399	45,659	42,250
		Farmers Market	3,484	39,829	1,953	39,079	10,367	90,648
		Wholesale	3,585	13,546	2,489	-	8,460	81,275
		Other	6,643	7,235	4,566	413	21,021	39,500
	Category of Sales - Other than Produce	Field Crops	-	7,662	-	-	-	45,972
		Hay	-	5,850	-	-	-	35,100
		Meat, Eggs, Dairy	674	23,667	-	3,235	3,345	125,225
		Other	88	7,588	-	1,890	350	29,245
	Other income		1,033	2,505	550	2,498	3,180	4,660
	Gross income		**46,801**	**158,467**	**45,352**	**105,636**	**64,040**	**405,461**

Table 5, cont.

Balance Sheet, Data Aggregated by Fruit and Vegetable Acres for FY2014

12 farms were categorized based on their acreage planted to fruits and vegetables. The two categories are 1-3 acres (*n*=6) and 4 -17 acres (*n*=6). From these categories, the average, median, and range* for farm responses is reported below.		Average		Median		Range	
		1-3 ac	4 -17 ac	1-3 ac	4 -17 ac	1-3 ac	4 -17 ac
Farm Expenses ($)	Car and truck expenses	3,528	5,020	2,376	5,435	10,158	12,071
	Chemicals	583	1,772	237	-	2,619	8,858
	Custom hire	322	505	-	-	1,705	1,360
	Depreciation and section 179	4,621	10,299	1,726	8,439	17,312	10,470
	Employee benefit (other than pension/profit sharing)	60	312	-	-	357	890
	Feed	301	9,308	-	5,910	1,806	28,403
	Fertilizers and lime	157	1,655	44	1,013	659	5,990
	Freight and trucking	144	76	80	-	535	381
	Gasoline, fuel, oil	443	3,174	411	2,662	625	8,049
	Insurance (other than health)	1,128	2,679	1,130	2,377	1,927	2,799
	Mortgage interest	-	1,344	-	1,012	-	3,644
	Other interest	1,016	965	78	-	5,250	4,820
	Labor hired	5,269	20,635	3,021	15,263	13,782	34,449
	Vehicle, machinery, equipment rent	348	295	208	-	1,240	925
	Other rent (land, animals)	881	5,867	143	700	4,350	26,949
	Repairs and maintenance	490	2,287	346	2,477	1,349	2,611
	Seeds and plants	3,614	5,204	3,177	3,838	5,786	11,558
	Supplies	5,734	7,004	5,082	5,641	10,437	12,789
	Taxes	741	825	536	265	2,327	2,558
	Utilities	5,749	3,207	1,268	2,989	28,888	5,054
	Vet, breeding, and medicine	-	187	-	-	-	646
	Other	3,263	6,783	3,192	5,701	2,865	12,661
	Total expense	**38,390**	**85,876**	**30,366**	**83,164**	**74,806**	**125,120**
Net Farm Profit (Loss) ($)		**8,412**	**72,591**	**2,483**	**13,270**	**43,122**	**373,594**
Additional Questions	Acres in fruit and vegetable production	2.1	8.1	2.3	6.3	2.0	12.5
	Total acres earning income	2.1	23.3	2.3	14.5	2.0	56.0
	Number years farming as a business	4.0	14.7	3.0	10.5	10.0	25.0
	Goal percent of household income from farming (%)	64	71	73	83	100	88
	Current percent of household income from farming (%)	31	51	15	45	100	99
	Hours each owner worked on farm in 2014	2,130	1,779	2,040	1,900	500	1,650
	Reported farmer compensation ($)	8,088	17,838	4,717	18,849	22,219	34,502
	Farmer compensation per owner-hour worked ($)	3.9	11.6	2.2	11.5	10.7	22.7

* Average = sum of values / number of farms; Median = middle reported value; Range = difference between highest and lowest reported values.

When considering the financial ratios grouped by number of acres planted to fruits and vegetables in **Table 6**, the farms with 4-17 acres in fruits and vegetables have more equity and assets, but from there the story is less black and white. Variation within the categories (see ranges) is high. Both groups of farms show strong average current ratios, rates of return on farm assets, and asset turnover ratios. In fact, the average and median values for nearly all the profitability indicators are strong or stable for both farm-size groups. The only weak values appear when a return to the farmer is arithmetically forced by assigning a wage to the owner's unpaid labor. When this is done, rate of return on farm assets and operating profit margin are reduced, especially for the 1-3 acre farm group. The average net income ratio for 4-17 acre farms (0.24) was higher than the ratio for 1-3 acre farms (0.15). Median net income ratio values were lower for both groups; 0.15 for the 4-17 acre farms, 0.11 for the 1-3 acre farms.

Table 6

Financial Ratios for FY2014, Farms Aggregated by Fruit and Vegetable Acres

12 farms were categorized based on their acreage planted to fruits and vegetables. The two categories are 1-3 acres (*n*=6) and 4 -17 acres (*n*=6). From these categories, the average, median, and range for farm responses is reported below.		Average		Median		Range		Benchmark Values				
		1-3 ac	4 -17 ac	1-3 ac	4 -17 ac	1-3 ac	4 -17 ac	Kohl (Blonde modified 2009)			Ag Decision Maker 2014	
Gross income ($)		**46,801**	**158,467**	**45,352**	**105,636**	**64,040**	**405,461**	strong	stable	weak	High third	Low third
Total expense ($)		**38,390**	**85,876**	**30,366**	**83,164**	**74,806**	**125,120**					
Net farm profit (loss) ($)		**8,412**	**72,591**	**2,483**	**13,270**	**43,122**	**373,594**					
Balance Sheet and Ratios	Liabilities ($)	22,565	98,619	195	67,982	116,997	222,750					
	Equity ($)	86,251	310,764	33,550	169,253	276,204	829,650					
	Liabilities+Equity ($)	**108,815**	**409,383**	**33,550**	**265,494**	**293,814**	**1,039,400**					
	Liabilities + Equity - Value of Home * ($)	**93,932**	**342,196**	**33,550**	**224,893**	**249,636**	**729,800**					
	Current Ratio	**3.45**	**3.04**	**3.45**	**4.33**	1.46	5.22	> 1.50	1.00 - 1.50	< 1.00	-	-
	Debt to Asset Ratio	**0.09**	**0.35**	**0.02**	**0.35**	0.45	0.56	< 0.30	0.30 - 0.70	> 0.70	0.28	0.22
	Rate of Return (RoR) on Farm Assets	**0.16**	**0.19**	**0.12**	**0.09**	0.75	0.65	> 0.05	0.01 - 0.05	< 0.01	0.158	0.029
	RoR on Farm Assets (with forced return to owner)**	**-0.43**	**0.07**	**-0.26**	**0.00**	1.38	0.77	> 0.05	0.01 - 0.05	< 0.01	0.158	0.029
	Operating Profit Margin	**0.16**	**0.27**	**0.11**	**0.16**	0.57	0.82	> 0.25	0.10 - 0.25	< 0.10	0.37	0.13
	Oper. Profit Margin (with forced return to owner)**	**-0.34**	**0.05**	**-0.35**	**-0.04**	0.70	1.07	> 0.25	0.10 - 0.25	< 0.10	0.37	0.13
	Asset Turnover Ratio	**1.18**	**0.63**	**1.20**	**0.68**	1.74	0.97	varies			0.45	0.28
	Operating Expense Ratio	**0.75**	**0.64**	**0.76**	**0.72**	0.55	0.68	< 0.65	0.65 - 0.80	> 0.80	0.54	0.71
	Depreciation Expense Ratio	**0.09**	**0.10**	**0.03**	**0.10**	0.22	0.14	varies			0.06	0.1
	Interest Expense Ratio	**0.01**	**0.02**	**0.00**	**0.01**	0.06	0.05	< 0.12	0.12 - 0.20	> 0.20	0.04	0.05
	Net Income Ratio	**0.15**	**0.24**	**0.11**	**0.15**	0.60	0.82	varies			0.36	0.14

* On three farms, the value of the home on the farmstead was included in the farm assets. The value of the home listed on the assessor's site was subtracted from the total assets for this calculation. This value (total assets - value of home) was used to calculate the Rate of Return on Farm Assets and the Asset Turnover Ratio. Because the value of the home could not be separated into debt and equity based on the information provided, values reported for liabilities and equity include the value of the home on three farms. This unadjusted value is used to calculate the Debt to Asset Ratio.

** Forced wage of $6/hr was used in this calculation unless the reported return to the farmer was > $6/hr. The $6/hr wage was imposed on five farms.

Aggregated by Total Farm Assets (Expense and Ratios)

When the 12 farms were aggregated based on their total farm assets, three distinct groups emerged: farms with assets <$40,000, total assets of $90,000 - $220,000, and total assets >$250,000. As seen in **Table 7**, on average, the farms with assets >$250,000 have been farming longer and have double the acres in vegetables than, and more than five times the average net farm income of, the group with $90,000 - $220,000 in total assets.

Farms with $90,000 - $220,000 in assets spent, on average, more of their total expenses toward hired labor (26 percent, compared to 18 percent for low asset and 16 percent for farms with assets >$250,000). Farms with <$40,000 in assets allocated most of their budget toward seeds and plants (12 percent) and supplies (19 percent). The percent of total expenses toward seeds, plants and supplies was 17 percent for the middle asset group and 16 percent for the high asset group.

Table 7

Balance Sheet for FY2014, Farms Aggregated by Total Assets *(cont. on next page)*

12 farms were categorized based on their total assets - the value of their home (if included in farm assets). The three categories are total assets <$40k (*n*=4), total assets ranging from $90k - $220k (*n*=4), and farms with total assets >$250k (*n*=4). From these categories, the average and median of farm responses are reported below.			**< $40k**		**$90-220k**		**>$250k**	
			Average	**Range**	**Average**	**Range**	**Average**	**Range**
Farm Income ($)	Profit on livestock for resale		12	49	3,933	10,163	0	0
	Sales of livestock, produce, grains, and other products you raised		31,897	43,531	78,121	57,129	188,891	400,801
	Category of Sales - Produce	Early Season CSA	0	0	0	0	0	0
		Summer CSA	19,847	55,000	36,342	25,947	17,049	35,750
		Fall/Winter CSA	1,634	4,000	6,948	8,550	5,375	13,000
		Restaurant	1,503	2,546	229	918	32,972	40,862
		Farmers Market	5,156	10,367	19,951	62,351	40,281	90,141
		Wholesale	1,486	2,489	1,251	5,005	22,434	81,275
		Other	4,628	9,380	1,058	3,084	15,130	39,500
	Category of Sales - Other than Produce	Field Crops	0	0	0	0	11,493	45,972
		Hay	0	0	0	0	8,775	35,100
		Meat, Eggs, Dairy	0	0	5,030	8,034	31,312	125,225
		Other	117	350	9,748	29,245	4,070	12,500
	Other income		555	876	3,168	2,848	1,465	4,660
	Gross income		**32,325**	**43,362**	**85,221**	**59,780**	**190,356**	**405,461**

Table 7, cont.

Balance Sheet for FY2014, Farms Aggregated by Total Assets

12 farms were categorized based on their total assets - the value of their home (if included in farm assets). The three categories are total assets <$40k (*n*=4), total assets ranging from $90k - $220k (*n*=4), and farms with total assets >$250k (*n*=4). From these categories, the average and median of farm responses are reported below.		< $40k		$90-220k		>$250k	
		Average	Range	Average	Range	Average	Range
Farm Expenses ($)	Car and truck expenses	1,593	1,952	5,453	2,664	5,777	12,071
	Chemicals	748	2,619	25	100	3,087	8,858
	Custom hire	426	1,705	348	1,167	453	1,360
	Depreciation and section 179	2,160	6,218	8,536	14,897	11,684	10,110
	Employee benefit (other than pension/profit sharing)	89	357	223	890	223	670
	Feed	0	0	4,985	5,531	9,468	28,403
	Fertilizers and lime	70	192	31	125	2,616	5,331
	Freight and trucking	174	535	138	381	0	0
	Gasoline, fuel, oil	557	372	1,625	2,562	3,244	8,634
	Insurance (other than health)	742	1,335	2,362	2,799	2,607	1,635
	Mortgage interest	0	0	517	2,066	1,552	3,644
	Other interest	39	155	1,379	4,820	1,750	5,250
	Labor hired	5,266	12,542	17,510	19,730	16,080	44,125
	Vehicle, machinery, equipment rent	414	1,240	212	846	340	925
	Other rent (land, animals)	1,159	4,350	597	1,688	9,200	26,949
	Repairs and maintenance	298	900	1,230	2,091	2,638	2,178
	Seeds and plants	2,902	2,117	2,901	3,551	7,424	10,216
	Supplies	4,539	4,687	8,424	9,846	6,143	10,877
	Taxes	529	526	1,288	2,558	433	1,300
	Utilities	961	1,446	2,806	2,932	9,668	28,434
	Vet, breeding, and medicine	0	0	234	646	0	0
	Other	3,134	2,721	5,855	7,096	6,080	12,661
	Total expense	**25,799**	**22,531**	**66,675**	**57,661**	**93,924**	**125,120**
Net Farm Profit (Loss) ($)		**6,526**	**23,300**	**18,546**	**32,747**	**96,432**	**383,969**
Additional Questions	Acres in fruit and vegetable production	1.6	1.5	4.5	3.0	9.1	13.5
	Total acres earning income	1.6	1.5	7.3	12.0	29.3	57.0
	Number years farming as a business	2.8	3.0	10.3	1.0	15.0	33.0
	Goal percent of household income from farming (%)	64	100	58	78	81	50
	Current percent of household income from farming (%)	32	100	29	53	61	100
	Hours each owner worked on farm in 2014	2,145	500	1,956	975	1,763	1,550
	Reported compensation per farmer ($)	7,913	22,219	12,800	27,721	18,175	35,000
	Farmer compensation per owner-hour worked ($)	3.8	10.7	6.7	13.9	12.8	22.9

Table 8 shows the financial ratios for farms aggregated by total assets. Overall, the average financial ratios for each group of farms are strong, but the large ranges of values within groups show, again, that there is variability among farms in each group. For the current ratio, the farms with <$40,000 in assets and the farms with >$250,000 in assets both show a range of 0. This is because three of the four farms in each category carried no short term liabilities when reporting their financials, and the ratio could not be calculated. Farms with <$40,000 in assets have, on average, a weak net income ratio (0.13). This means only 13 percent of their revenue remains as profit; the remainder is used for operating expenses, depreciation expenses, or interest expense. The range for this group is quite large as well (0.41). On average, however, these farmers have only been farming as a business for 2.8 years, and have some more hurdles to overcome before obtaining consistent profitability. Ratios also take a dive when returns to the farmer are forced at a rate of $6/owner hour, as also seen in **Table 6.**

Table 8

Financial Ratios for FY2013, Farms Aggregated by Total Assets

12 farms were categorized based on their total assets - the value of their home (if included in farm assets). The three categories are total assets <$40k (*n*=4), total assets ranging from $90k - $220k (*n*=4), and farms with total assets >$250k (*n*=4). From these categories, the average and median of farm responses are reported below.

		< $40k		$90-220k		>$250k		Benchmark Values				
		Average	Range	Average	Range	Average	Range	Kohl (Blonde modified 2009)			Ag Decision Maker 2014	
Gross income ($)		**32,325**	**43,362**	**85,221**	**59,780**	**190,356**	**405,461**	strong	stable	weak	High third	Low third
Total expense ($)		**25,799**	**22,531**	**66,675**	**57,661**	**93,924**	**125,120**					
Net farm profit (loss) ($)		**6,526**	**23,300**	**18,546**	**32,747**	**96,432**	**383,969**					
Balance Sheet and Ratios	Liabilities ($)	98	25,503	66,120	211,211	115,558	872,367					
	Equity ($)	22,514	25,503	117,888	121,911	455,120	562,767					
	Liabilities+Equity ($)	**22,612**	**390**	**184,008**	**112,000**	**570,677**	**222,750**					
	Liabilities + Equity - Value of Home * ($)	**22,612**	**25,893**	**138,303**	**236,211**	**493,277**	**736,614**					
	Current Ratio	**2.72**	0.00	**2.77**	4.55	**5.00**	0.00	> 1.50	1.00 - 1.50	< 1.00	-	-
	Debt to asset	**0.01**	0.04	**0.43**	0.56	**0.23**	0.40	< 0.30	0.30 - 0.70	> 0.70	0.28	0.22
	Rate of Return (RoR) on Farm Assets	**0.20**	0.75	**0.15**	0.21	**0.18**	0.67	> 0.05	0.01 - 0.05	< 0.01	0.158	0.029
	RoR on Farm Assets (with forced return to owner)**	**-0.61**	1.38	**-0.06**	0.19	**0.13**	0.71	> 0.05	0.01 - 0.05	< 0.01	0.158	0.029
	Operating profit margin	**0.13**	0.41	**0.26**	0.45	**0.26**	0.94	> 0.25	0.10 - 0.25	< 0.10	0.37	0.13
	Oper. Profit margin (with forced return to owner)**	**-0.41**	0.69	**-0.09**	0.29	**0.07**	1.17	> 0.25	0.10 - 0.25	< 0.10	0.37	0.13
	Asset turnover ratio	**1.61**	1.44	**0.68**	0.71	**0.43**	0.73	varies			0.45	0.28
	Operating expense ratio	**0.80**	0.40	**0.66**	0.36	**0.63**	0.69	< 0.65	0.65 - 0.80	> 0.80	0.54	0.71
	Depreciation expense ratio	**0.07**	0.22	**0.09**	0.11	**0.12**	0.19	varies			0.06	0.1
	Interest expense ratio	**0.00**	0.01	**0.02**	0.05	**0.02**	0.06	< 0.12	0.12 - 0.20	> 0.20	0.04	0.05
	Net income ratio	**0.13**	0.41	**0.23**	0.48	**0.23**	0.94	varies			0.36	0.14

* For income per owner-hours worked, the larger of value of "net income" or "owners draw" was used, divided by the total number of owner hours worked. Example: farm net income = $10,000; farm owners draw = $8,500; the farm has two owners, each worked 2,000 hours. Income/owner-hour = $10,000/(2,000*2) = $2.5/hour. If owners were paid out of hired labor, however, hours were not multiplied by the number of owners (which is an imperfect assumption). Owners were paid out of hired labor on two farms.

** Forced wage of $6/hr was used in this calculation unless the reported return to the farmer was > $6/hr. The $6/hr wage was imposed on five farms.

Conclusion and Next Steps

This report, aggregating and analyzing the 2014 financials of 12 diversified fruit and vegetable farms, is intended to be illustrative and educational for farmers with similar types of operations. Just as no two farms have the same physical attributes, no two farmers have the same farm financial goals and strategy. When using the data, be especially mindful of the large range values – the difference between the highest and lowest reported values. A large range, indicating high variability among farms, makes averages less useful as benchmarks.

Craig Chase suggests tracking one ratio from each category (liquidity, solvency, profitability, efficiency), and to begin, he recommends tracking: the current ratio, debt to asset ratio, rate of return on farm assets, and the balance of the efficiency ratios (operating expense ratio + depreciation expense ratio + interest expense ratio + net income ratio = 100 percent of gross revenue).

He also offers five common profitability problems to watch out for:

- *Capital investments are too high relative to income.* This will affect the rate of return on farm assets, the asset turnover ratio, and likely the depreciation and interest expense ratios.
- *Depreciation or interest expenses are too high (>10 percent of gross revenue)*: This will make less cash available for operating expenses and net profit.
- *Operating expenses (especially feed and labor) are too high (>60 percent of gross revenue)*: This will make less cash available for net profit. Farmers should be mindful of the value of their own labor, however. Too often farmers do not account for their labor when analyzing financials. At times, hiring labor for field work makes more financial sense, as it frees up valuable owner-labor for higher value management tasks.
- *High market value for assets makes adequate returns difficult to achieve*: This is especially true for land values. Chase recommends keeping land values constant, and conservative, in the balance sheet to avoid becoming "upside down" if land values decline.
- *Sales prices are too low*: Ensure that you are receiving a fair price for your work. Enterprise budgets by crop or by market are needed to establish fair prices.

Reflections from Four Participating Farms

Farm B:

Farm B was pleased to see that their operating profit margin had improved by 10 percent from 2013 to 2014, and that they increased revenue per acre by ~$6,500. Their expenses per acre also increased, but at only half the rate ($3,000) of their revenue gains. Since Farm B turned in 2014 data, they feel their farm has improved even more: "This year our fall CSA has almost doubled, our market sales are up 10 percent, and our Summer CSA was over 90 shares. Our checkbook balance is healthier than it's ever been. Years ago I read "Building a Sustainable Business" from the Minnesota Institute for Sustainable Agriculture. They encourage people to shoot for 30-33 percent profit; we're almost there. I'm accused of having the highest prices at farmers market, but why would I grow it if I can't do it profitably? I also shoot for more than $30,000 in gross sales. We are now achieving that."

Farm B is also building assets outside the farm business. "We built a new house on our farm in 2015; one that isn't as big as many new houses, but is aesthetically pleasing to us. The farm business rents the garage, which covers the mortgage on the new house." The garage at Farm B houses the walk-in cooler and serves as the packing shed and wash station. "The new house doesn't increase the value of the farm business, but it does increase the value of our property."

Farm P:

"Context is critical to understanding. The report states that farms are between 1 and 35 years in operation... my farm, being in its first, has some numbers that are at the ends of the ranges. I considered it the first year of starting up a business, and had not planned to make money in the first year. My second year was a lot different. And so has been my third! I reported that I was not yet meeting profitability goals but have a plan to improve... I would say that I wasn't trying to be profitable that year, and was using investment in a start-up phase to show loss on taxes to offset non-farm income; it was part of a broader financial strategy. That first year I did not meet profitability goals for where I plan to be in time, but I did meet my profitability goal for that first year. Without telling the full story, looking at farm numbers over multiple years in this report will be important."

Farm F:

On financial strategy:

"Here's the thing that's not quantifiable: I'm extremely financially conservative. I believe in taking baby steps and making a little more money each year. As a person, I want to remain independent from the farm; if one day I decide this isn't the life for me, I want to have the freedom to make that choice. I make farm purchases out of my operations budget. It's not the financial guru (borrowing money) way to do it, but it's what I'm comfortable with. I often say, "That's a lot of beets," meaning: it takes a lot of beets to come up with $20,000 to pay back a debt. I don't want to owe a third-party entity money. That's just how I live my life; I want to be self-sufficient. Maybe I'm a little idealistic about it, but I'd rather the farm owe money to me than to someone else."

On the early years:

"My expectation in the early years wasn't to show a profit right away, it was to figure out my systems and infrastructure so I could slowly scale up and eventually become profitable with the farm systems that fit me, and fit the markets. In the early years, I was accomplishing things like: building production systems, installing infrastructure, working out packshed flow, learning Quickbooks, training employees, learning to manage employees and delegate tasks, implementing mechanization, experimenting with new crops, and trying different customer service strategies."

"I was always told that you can't make a living off of vegetables. I was determined to figure out how to do it. Starting out knew I wasn't going to be a CSA farm, and I wasn't going to be reliant on Farmers Markets. There's a million ways to do things, and I needed to figure out how to make our crops into products (like a Thanksgiving Box). I needed to figure out how to balance what markets wanted (and paid for) with what was efficient, profitable, and enjoyable on the farm."

On meeting goals:

"My profit goal for 2014, the year for this report, was actually 0 percent, and I surpassed it! My sales goal was $14,000 and I hit $20,000. It isn't reflected in these early profitability numbers that I had stable markets and sales moving in the right direction, even though they were small. In 2015 I wanted to net a little more, and ended up doing better than I expected, again. This year I wanted to net $4,000 more than 2015, and am going to end up only $1,000 over 2015. But I have another measure of profitability: that

I am able to live off my farm income for six months of the year. Even if I don't meet my net profit goal, I am still meeting this lifestyle goal. Additionally, I achieved a much better work-life balance this year, and didn't feel like the farm "owned" me 24/7."

"My ultimate goal would be to have 100 percent of my income from the farm; I just don't know how realistic that is. My "realistic" ultimate goal is that 90 percent of my total income would be from the farm. My most realistic goal is 65 percent, which is what I provided for this report."

Farm L:

On Farm L's numbers:

"Nothing in the report is alarming. We had just taken out some loans, so a couple numbers were weaker than we'd like, like debt to asset, but it isn't a surprise. Get three years together and you might start to see a picture. That picture, however, might not show steady trends, but might instead show that the numbers for small farms like these are very fluid from year to year. With this size of business, it doesn't take much to really change the numbers fairly quickly from year to year. One big account can really make a difference."

On calculations using the forced return to farmer:

"I'm glad the calculation with the forced return is there. It's a reminder that most of us aren't paying ourselves all that well. But there are a number of things we're all paying ourselves with that we don't take into account. I have a truck. It's the farm's truck. What I give myself through the farm is part of my pay. For those who think they're going to get 100,000 an acre… this gives a better picture.

Also, we have off-farm income. If we were worried about profit more, some of things we do… we wouldn't do. Like so much on-farm research, or trying out new ideas so other people don't have to. I don't mind scrabbling around to make all the mistakes first."

On gross revenue/acre:

"Our farm shows a lower gross revenue per acre than some of the other farms, which I expected because we're not pushing very hard on production per acre. But perhaps some of the data I gave you for acres, based on the questions, isn't totally reflective of the production at a given time. I typically come up with $10,000-12,000/ac for vegetables. High tunnel production is going to be much higher revenue per acre, and those differences are not reported in this data.

I'd also like to point out the statistical range reported in many of the tables – it's huge. With a large range, it makes it hard to say much based on the averages. If you're under the average in a certain category, is that bad? Or are you just using a different strategy?"

On using the data:

"If I'm putting myself in the shoes of a beginning farmer, Table 5 and Table 7 – the expenses in particular are very useful. Those are real, on the ground numbers. Having some idea what other people are spending, and on what – know that can't hurt! Particularly, the insurance numbers are pretty consistent. The labor numbers are also more consistent that I would have thought. Machinery and chemicals are driven by farm choices.

The income part of the balance sheet is pretty simple to estimate on your own. If you set your prices and plan your production, you can guess what your gross revenue will be. It's the expenses that get people into trouble. Early on we had some issues with that – some things were more expensive than expected, some things came up we hadn't even considered. Until you start writing the checks, you don't know for sure."

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PFI Cooperators' Program

PFI's Cooperators' Program gives farmers practical answers to questions they have about on-farm challenges through research, record-keeping, and demonstration projects. The Cooperators' Program began in 1987 with farmers looking to save money through more judicious use of inputs. If you are interested in conducting an on-farm trial contact Stefan Gailans @ 515-232-5661 or stefan@practicalfarmers.org.

Appendix 1

SCHEDULE F
(Form 1040)

Adjusted for PFI Whole Farm Project

Part A: Profit or Loss From Farming

2014

Name of proprietor

Accounting method:
☐ Cash ☐ Accrual

Part I Farm Income

1a	Sales of livestock and other resale items (see instructions)	1a				
b	Cost or other basis of livestock or other items reported on line 1a	1b				
c	Subtract line 1b from line 1a				1c	
2	Sales of livestock, produce, grains, and other products you raised				2	

Category of Sales:

Produce Sales:

Early Season CSA		Restaurant	
Summer CSA		Farmers Market	
Fall/Winter CSA		Wholesale Produce	
		Other	

Other than Produce Sales:

Field Crops	
Hay	
Meat, Eggs, Dairy	
Other	

8	All other farm income	8		
9	Gross income. Add amounts in the right column (lines 1c, 2, 8)	9		

Part II Farm Expenses Do not include personal or living expenses

10	Car and truck expenses	10		23	Pension and profit-sharing plans	23	
11	Chemicals	11		24	Rent or lease (see instructions):		
12	Conservation Expenses	12		a	Vehicles, machinery, equipment	24a	
13	Custom hire (machine work)	13		b	Other (land, animals, etc.)	24b	
14	Depreciation and section 179 expense	14		25	Repairs and maintenance	25	
				26	Seeds and plants	26	
				27	Storage and warehousing	27	
15	Employee benefit programs other than on line 23	15		28	Supplies	28	
				29	Taxes	29	
16	Feed	16		30	Utilities	30	
17	Fertilizers and lime	17		31	Veterinary, breeding, and medicine	31	
18	Freight and trucking	18		32	Other expenses (specify):		
19	Gasoline, fuel, and oil	19		a		32a	
20	Insurance (other than health)	20		b		32b	
21	Interest:			c		32c	
a	Mortgage (paid to banks, etc.)	21a		d		32d	
b	Other	21b		e		32e	
22	Labor hired	22		f		32f	

33	Total expenses. Add lines 10 through 32f	33	
34	Net farm profit or (loss). Subtract line 33 from line 9	34	

Part B: Balance Sheet (FY 2014)

	Current (<1 yr)	Intermediate (>1 - 10 yr)	Long-term (>10 yr)
Equity	$	$	$
Liabilities	$	$	$
Assets *(equity + liabilities)*	$	$	$

Are any personal assets included in your farm assets? If so, please explain:
◯ yes ◯ no

Part C: Additional Questions (2014 info)

1. Acres in vegetable production . . ☐ tree fruit / berries . . . ☐

2. Total acres earning income . . . . . ☐

3. Number of years farming as a business. . . . . ☐

4. Goal percent of household income from farming . . . ☐

5. Current percent of household income from farming . ☐

6. Type of farm business (LLC, C-corporation, etc) . . . ☐

7. Estimated hours each owner worked on farm in 2014 ☐

8. Is owner labor included in farm expenses on Part A? ◯ yes ◯ no

9. Estimated owners draw for living expenses in 2014 (in addition to net income) $ ☐

10. Are you planning to expand any of the following enterprises?
☐ tree fruit / berries ☐ vegetable ☐ field crops ☐ livestock ☐ hay ☐ other

11. Are you meeting your expectations for farm profitability?
yes ◯
no ◯

12. If you are not meeting your expectations for farm profitability, are you planning to make changes?
yes ◯
no ◯
I am meeting my expectations for farm profitability. ◯

13. Please describe the financial goals for your farm, or attach as a separate document.