

Basic Financial Management and Recordkeeping Systems for Specialty Crop Growers



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THANKS!



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WHY ARE YOU HERE?

WHY KEEP RECORDS?

- Taxes
- Determine profitability
- Measure Enterprise Performance
- Benchmark your farm
- Manage cash flow
- Analyze Investments
- Obtain Loans
- Manage Risk

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**SCHEDULE F
(Form 1040)**

Department of the Treasury
Internal Revenue Service (99)

Profit or Loss From Farming

▶ Attach to Form 1040, Form 1040NR, Form 1041, Form 1065, or Form 1065-B.

▶ See Instructions for Schedule F (Form 1040).

OMB No. 1545-0074

2009

Attachment
Sequence No. **14**

Name of proprietor

Social security number (SSN)

A Principal product. Describe in one or two words your principal crop or activity for the current tax year.

B Enter code from Part IV

▶									
---	--	--	--	--	--	--	--	--	--

C Accounting method:

(1) Cash

(2) Accrual

D Employer ID number (EIN), if any

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E Did you "materially participate" in the operation of this business during 2009? If "No," see page F-2 for limit on passive losses. Yes No

Part I Farm Income—Cash Method. Complete Parts I and II (Accrual method. Complete Parts II and III, and Part I, line 11.)
Do not include sales of livestock held for draft, breeding, sport, or dairy purposes. Report these sales on Form 4797.

1	Sales of livestock and other items you bought for resale	1				
2	Cost or other basis of livestock and other items reported on line 1	2				
3	Subtract line 2 from line 1	3				
4	Sales of livestock, produce, grains, and other products you raised	4				
5a	Cooperative distributions (Form(s) 1099-PATR)	5a			5b Taxable amount	5b
6a	Agricultural program payments (see page F-3)	6a			6b Taxable amount	6b
7	Commodity Credit Corporation (CCC) loans (see page F-3):					
a	CCC loans reported under election				7a	
b	CCC loans forfeited	7b			7c Taxable amount	7c
8	Crop insurance proceeds and federal crop disaster payments (see page F-3):					
a	Amount received in 2009	8a			8b Taxable amount	8b
c	If election to defer to 2010 is attached, check here ▶ <input type="checkbox"/>				8d Amount deferred from 2008	8d
9	Custom hire (machine work) income	9			9	
10	Other income, including federal and state gasoline or fuel tax credit or refund (see page F-3)	10			10	
11	Gross income. Add amounts in the right column for lines 3 through 10. If you use the accrual method to figure your income, enter the amount from Part III, line 51 ▶	11			11	

Part II Farm Expenses—Cash and Accrual Method.

Do not include personal or living expenses such as taxes, insurance, or repairs on your home.

12	Car and truck expenses (see page F-5). Also attach Form 4562	12			25	Pension and profit-sharing plans	25
13	Chemicals	13			26	Rent or lease (see page F-6):	
14	Conservation expenses (see page F-5)	14			a	Vehicles, machinery, and equipment	26a
15	Custom hire (machine work)	15			b	Other (land, animals, etc.)	26b
16	Depreciation and section 179 expense deduction not claimed elsewhere (see page F-5)	16			27	Repairs and maintenance	27
17	Employee benefit programs other than on line 25	17			28	Seeds and plants	28
18	Feed	18			29	Storage and warehousing	29
19	Fertilizers and lime	19			30	Supplies	30
20	Freight and trucking	20			31	Taxes	31
21	Gasoline, fuel, and oil	21			32	Utilities	32
22	Insurance (other than health)	22			33	Veterinary, breeding, and medicine	33
23	Interest:				34	Other expenses (specify):	
					a	-----	34a
					b	-----	34b
					c	-----	34c

WHAT DO I NEED FOR TAXES

- Records of Income
 - Bank Deposits can serve as a record
 - Large income streams get 1099
 - Otherwise self reporting
- Written Records of Expenses
 - Receipts
 - Mileage Log

HOW LONG TO KEEP RECORDS

Generally, you must keep your records that support an item of income, deduction or credit shown on your tax return until the period of limitations for that tax return runs out.

WHY KEEP RECORDS?

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$$\text{INCOME} - \text{EXPENSES} \\ = \\ \text{PROFIT}$$

$$\begin{aligned} & \text{INCOME} - \\ & \text{OVERHEAD EXPENSES} - \\ & \text{VARIABLE EXPENSES} \\ & = \\ & \text{PROFIT} \end{aligned}$$

WHY KEEP RECORDS?

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OTHER RECORDS

- Production Records
 - How much do you grow?
- Disaggregated Sales Records
 - What do you sell where?
- Break Out Expenses by Crop

ENTERPRISE BUDGETS

Iowa Vegetable Farm - Bell Pepper Budget Example

High Tunnel Size (sq. ft.) (30 x 72) 2,160 ft.
 Utilization 94%
 Approximate Original High Tunnel Cost \$7,000.00

Receipts	Yield	Sq. Ft.	\$/lb	Total
Peppers - Bell (520 plants)	3,248.6	2030	1.30	4,223.23
Total Receipts				\$4,223.23

Annual Expenses	Total
Seeds/Transplants	175.00
Fertilizers	108.00
Miscellaneous Supplies	125.00
Water	86.40
Water Test	17.00
Irrigation Supplies	122.00
Total Annual Expenses	\$633.40

WHY KEEP RECORDS?

- Taxes
- Determine profitability
- Measure Enterprise Performance
- **Benchmark your farm**
- Manage cash flow
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- Obtain Loans
- Manage Risk

BENCHMARKING YOUR FARM

- KSRE- Farm Management
- Iowa State Vegetable Production Budgets
- Veggie Compass www.veggiecompass.com

WHY KEEP RECORDS?

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- **Manage cash flow**
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TRACKING/PREDICTING CASH FLOW

- Not the same as profit
- Cash flow makes or breaks your business
- Must figure out expenses over smaller period of time (month, week, etc)
- Make a plan, then revise based upon experience

WHY KEEP RECORDS?

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- Manage cash flow
- **Analyze Investments**
- Obtain Loans
- Manage Risk

ANALYZING INVESTMENTS

- Should you buy the latest implement?
- Is that tunnel worth the high cost?
- Financial records and cash flow help evaluate investment options

WHY KEEP RECORDS?

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- **Obtain Loans**
- Manage Risk

C. CROP PRODUCTION			
	20__	20__	20__
1. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
2. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
3. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
4. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
5. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
6. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
7. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
8. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			
9. Crop _____ Unit _____			
a. Total Yield			
b. Acres			
c. Average Yield			

D. SIGNATURE	
<i>I certify that the information is true, complete, and correct to the best of my knowledge and is provided in good faith. (Warning: Section 1001 of Title 18, United States Code, provides for criminal penalties to those who provide false statements. If any information is found to be false or incomplete, such finding may be grounds for denial of the requested action.)</i>	
1. Signature	2. Date

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PRODUCE SAFETY

- Exemption/Qualified Exemption or Non-Exempt
Determines what records you must legally keep under the Food Safety and Modernization Act
- Exempt
 - financial records to prove
- Non-exempt
 - must keep detailed records of efforts to insure produce safety
- Even if not legally required to keep these records it can be good, help you in case of any problems

NAP

- Non-Insured Crop Disaster Assistance
- Need Actual Production History (APH)
- Verified Production Records

NAP

Crop Production Ledger

CROP	Sweet Corn	CROP YEAR	2015	ROW LENGTH (FT)	200
TYPE/VARIETY	Silver Queen	FIELD NUMBER	10	ROW WIDTH (FT)	2
INTENDED USE	Fresh	PLANTING DATE	5/15/2015	NUMBER OF ROWS	30
				ACREAGE	0.2755

IRRIGATION	Drip				
FERTILIZER	10 lbs of 10-10-10 per row				
HERBICIDE	1/2 pint of Roundup prior to planting				
PESTICIDE	None				
UNIT OF MEASURE	Dozen	POUNDS PER UNIT OF MEASURE	9 pounds		

HARVEST DATE	PRODUCTION	HARVEST DATE	PRODUCTION	HARVEST DATE	PRODUCTION
8/15/2015	35.00				
8/17/2015	40.00				
8/19/2015	38.00				
					TOTAL PROD

Doug

NOTES:

<https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/noninsured-crop-disaster-assistance/index>

WHOLE FARM REVENUE

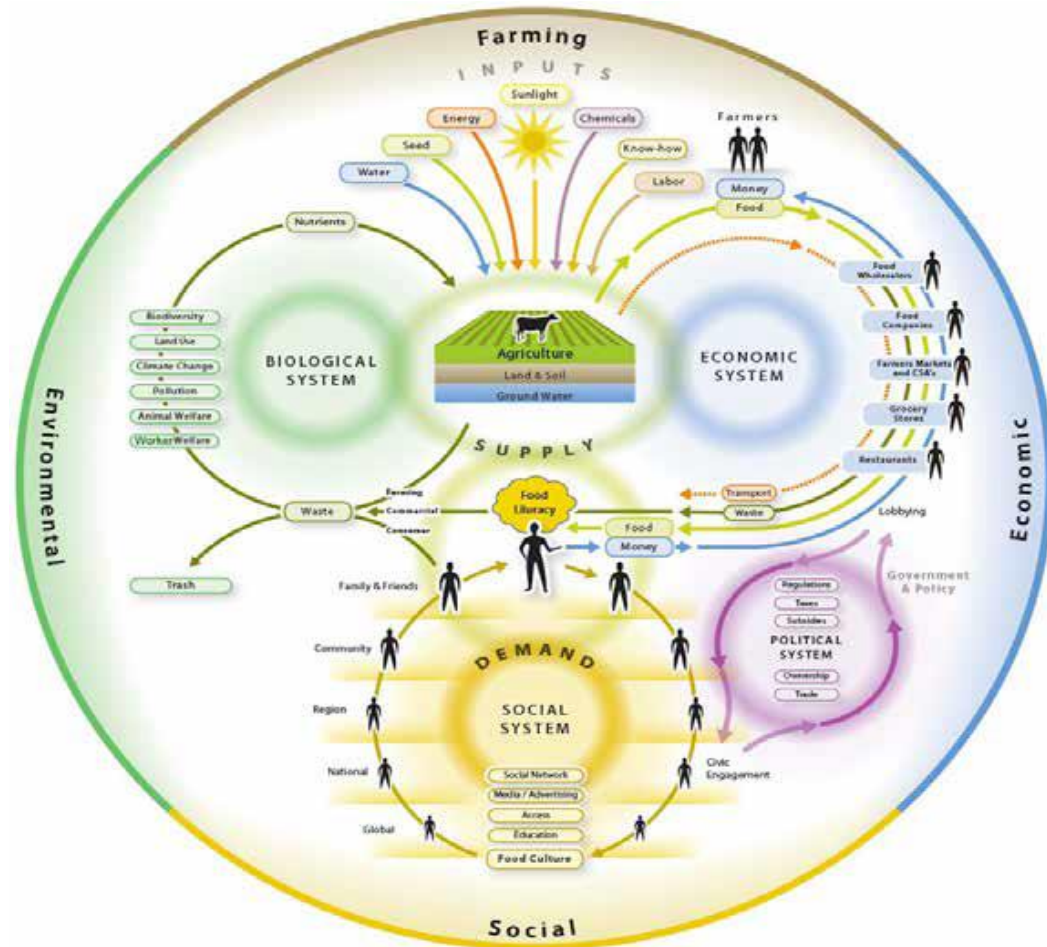
- The go to form of crop insurance for diversified operations
- Also great for operations that don't grow traditional commodities
- Records must be kept to verify production levels

ENOUGH WHY, NOW HOW?

- What reasons apply to your situation?
- Make sure you come up with a manageable system

WHAT ARE SYSTEMS

Relational
Holistic



<https://www.sare.org/Learning-Center/Books/Systems-Research-for-Agriculture>

THINK ABOUT THE SYSTEM

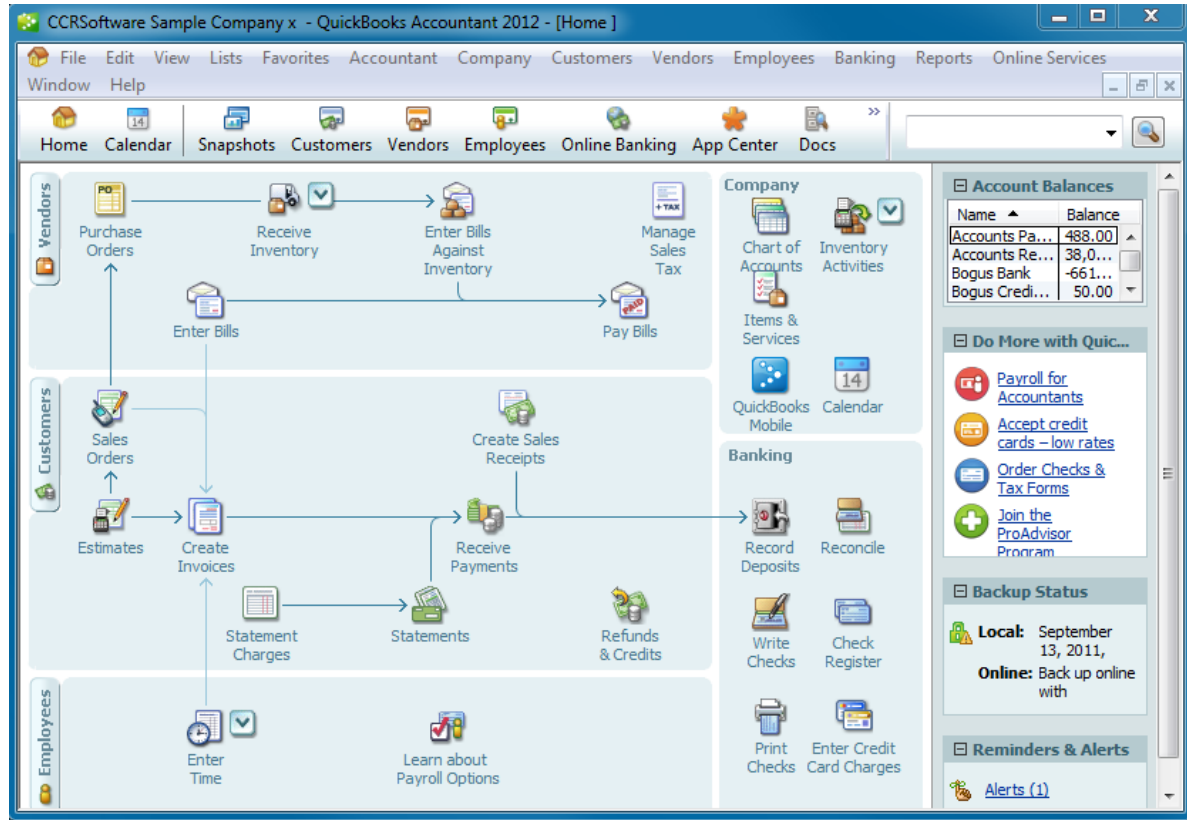
- What other records do you keep?
 - Organic Certification
 - Food Safety Records (GAPS?)
- Think about ways to streamline/reduce redundant paperwork

RECORD-KEEPING TOOLS

- Spreadsheets
 - MS Excel or Open Office (www.openoffice.org)
- Accounting Software
 - Quicken
 - Quickbooks (online or desktop?)

ACCOUNTING SOFTWARE

- Quicken
- Quickbooks
- Online
- Desktop



FINANCIAL ANALYSIS TOOLS

Standard Tools

- Enterprise Budget
- Cash Flow
- Balance Sheet and Income Statement
- Templates
 - Iowa State
 - Organic Farmers Business Handbook
 - Veggie Compass
 - Cultivate KC Spreadsheet

Enterprise Budget Templates

Iowa Vegetable Farm - Bell Pepper Budget Example

High Tunnel Size (sq. ft.) (30 x 72) 2,160 ft.
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Enterprise Budgets- Other expenses

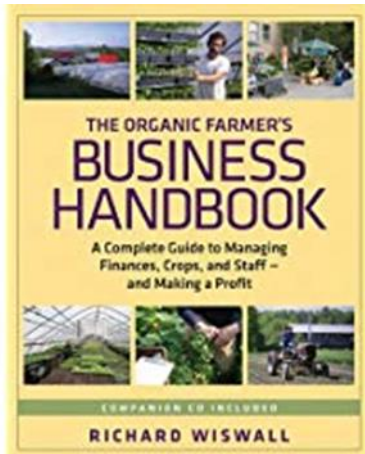
March - September

Labor Costs	Hours	\$/Unit	Total
Bed Preparation	10.00	12.00	\$120.00
General Maintenance	10.00	12.00	\$120.00
Planting	9.00	12.00	\$108.00
Pest Management	0.00	12.00	\$0.00
Harvest	30.00	12.00	\$360.00
Total Hours	59.00		\$708.00

Ownership Costs	Annual
Depreciation - Tunnel	\$875.00
Depreciation - Plastic Cover	113.40
Total Ownership	\$988.40

Total Costs	
Tunnel	\$2,329.80
Per Square Foot	\$1.08
Annual Returns Over Total Costs	
Tunnel	\$1,893.43
Per Square Foot	\$0.88

Simple Crop Budget



Expenses	Labor Cost	Machinery Cost	Product Cost
Prep Soil			
Spread 1 load compost	6.28	2.5	100
Spread 75 lb SoPoMag	3.14	1.25	18
Spread 200 lb poultry compost	3.14	1.25	40
Disk 1x	3.14	1.25	0
Chisel and bedform	6.28	2.5	0
Seed/Transplant			
Plant 125,000 seeds	12.55	0	79
Cultivation			
Flame Weeds	6.28	2.5	8
Cultivate with baskets 3x	16.73	3.75	0
Cultivate with sweeps 2x	6.28	2.5	0
Irrigate 1x	18.83	10	0
Hand Weed 3x (32 hours)	401.6	0	0
Cultivate wheel tracks	3.14	1.25	0
Harvest			
Bedlift 2 beds	9.43	3.75	0
Harvest 47 hours	58.85	0	0
Wash, sort, pack (200-25 lb bags, 29 hours)	363.95	0	50
Post-Harvest			
Disk 1x	3.14	1.25	0
Seed 25 lb Oat cover crop	9.43	3.75	22
Total Expenses	1463.19	37.5	317
Total Expenses			1817.69

Income	# 25 lb bags	Price/Bag	Total \$
Sales			
Retail	40	43.75	1750
Wholesale	160	25	4000
Total Sales			5750
Net Profit per ¼ acre 5750-1817.69=\$3932.31			

CROP JOURNAL

- Record all interactions with crop
- 1 sheet per crop
- Include at least the following as column headings-
 - Date
 - Job Done
 - Labor Time
 - Equipment Usage
 - Other Notes

CROP BUDGET PART 1

Crop Enterprise Budget

Copyright © Richard Wiswall 2009

Crop Year:

Crop: **Cabbage**

Unit Area: **Two 350' beds**

Note: Twenty 350' beds = 1 acre

and specify: early, mid, late

Bed feet or acres: **700' or 1/10A**

Today's Date:

Rows per bed & plant spacing: **2 rows/bed, T planted 16" apart, no mulch**

Costs in \$:

Remember to prorate to unit area
\$ \$ \$

Field:

Prepare Soil:

	Labor cost	Machinery cost	Product cost
Disk 1x	1.26	0.73	
Chisel 1x	2.51	0.74	
Rototill 1x, 2x			
Bedform 2x	5.02	1.48	
Fertilizer	1.26	0.68	10.00
Manure, compost	2.52	1.02	25.00
Other			
Plastic mulch			

NOTES: Labor at \$12.55/hr. See Worksheet 1 Figures below are for two 350' beds
 1A at a time: 1 hr total for 20 beds = 6 mins/2 beds; \$1.26L, \$0.63 + .10 = \$0.73M w/ JD 2240; see Worksheet 4
 .5A at a time: 1 hr total for 10 beds = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M w/ Ford 4000; see Worksheet 4
 .5A at a time: 2 hrs total for 10 beds = 24 mins/2 beds; \$5.02L, \$1.28 tractor + .52 tiller = \$1.80M w/ Ford 4000
 .5A at a time: 1 hr total for 10 beds = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M for ONE pass w/ Ford 4000
 500 lbs 4-3-3/A at a time: 1 hour total for 20 beds = 6 mins/2 beds; \$1.26L, \$0.63 + .05 = \$0.68M, \$10Pr w/ JD 2240
 1A at a time: compost at \$25/yd, 10 yds/A; 2 hrs total for 20 beds = 12 mins per 2 beds; \$2.51L, \$1.26 + .75 = \$2.01M, \$25Pr w/ JD 2240
 .5A at a time: 1.5 hr/A laying = 10 mins/2 beds; \$2.09L, \$0.53 + .17 = \$0.70M, \$20Pr w/ Ford 4000

Seed/Transplant:

Seeding in field			
Cost of transplants			63.00
Transplanting labor	25.23		

2 beds at a time: 30 mins/2 beds total = \$6.28L
 \$6.49/128 = \$0.06/plant 1050 plants
 3 rows by hand: 3 hrs/2 beds total = \$37.65L 2/3 of 3-row time
 2 rows w/ transplanter, 6 beds at a time; 1 hr prep plants, 1.5hr x 3 people transplanting, 2 hrs machinery for 2 beds = \$22.78L, \$2.11 + .66 = \$2.77M

Cultivation:

Reemay on/off			
Hoing 1x, 2x, 3x	25.10		
Hand weeding 1	50.20		
Hand weeding 2	25.10		
Hand weeding 3			
Straw mulch			
Irrigating 1x	7.53	8.37	
Tractor cultivating 6x	7.56	3.48	
Side-dressing			
Spraying	2.51	0.74	6.00
Flame weeding			
Other			

For 2 beds: \$105/3 uses = \$35Pr, .75 hr laying = \$9.41L
 at \$12.55/hr: average 1 hr/2 beds \$12.55/2 beds
 at \$12.55/hr: average 8 hrs/2 beds \$100.40/2beds
 at \$12.55/hr: average 4 hrs/2 beds \$50.20/2beds
 at \$12.55/hr: average 2 hrs/2 beds \$25.10/2beds
 40 bales at \$3, 1 hr/2 beds; \$12.55L, \$120.00Pr
 \$7.53L, \$8.37M per 2 beds, each use, w/ JD 2240
 1A at a time: 1 hour/A = 6 mins/2 beds; \$1.26L, \$0.53 + .05 = \$0.58M per pass w/ Cub mostly
 Spin 500 lbs 4-3-3/A, 1 hr total/20 beds = 6 mins/2 beds; \$1.26L, \$0.32 + .05 = \$0.37M, \$10Pr w/ Ford 4000
 1 hr .5A total time = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M, \$6Pr w/ Ford 4000
 10 beds/hr = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M, \$6Pr w/ Ford 4000

Pre-harvest Subtotal: **155.80** **17.24** **104.00**

= **277.04** Pre-harvest cost for two beds

CROP BUDGET PART 2

Harvest:

Total yield for two 350' beds =		50 cases	900 heads: 50 18-count or 50-lb cases
Total hours to harvest two 350' beds		6.25 hrs	at 8 cases/hr
Field to pack house	78.44		at \$12.55/hr 6.25 hrs
Pack house to cooler	62.75		at \$12.55/hr at 10 50-lb cases/hr
Bags, boxes, labels		78.50	\$0.25/bag, \$1.00/box, \$0.07/label at \$1.57/cabbage box
Delivery	30.12	9.60	See Worksheet 1.

Post Harvest:

Mow crop	2.09	0.70	6 beds at a time: 10 mins/2 beds; \$2.09L, \$0.53 + .17 = \$0.70M w/ Ford 4000
Remove mulch			1 hour/2 beds: \$12.55L
Disk	1.26	0.73	\$1.26L, \$0.63 + .10 = \$0.73M w/ JD 2240, see disking above.
Sow cover crop: spinner	1.26	0.68	1A at a time: 1 hr/20 beds = 6 mins/2 beds; \$1.26L, \$0.63 + .05 = \$0.68M, \$8Pr w/ JD 2240
Sow cover crop: Brillion			1A at a time: 2 hrs/20 beds = 12 mins/2 beds; \$2.51L, \$1.26 + .20 = \$1.46M, 8Pr w/ JD 2240
Other			

Post-harvest Subtotal: 331.72 28.95 190.50 = 551.17 Harvested cost for 2 beds

Marketing Costs:

Labor: sales calls for season (for this crop only)	6.28		Average 10 mins/week for 3 weeks: .5 hr
Commissions			Commissions, if any, to growers' co-op, broker, or salesperson
Farmers' market expense	60.24	4.70	9.00 See Worksheet 1.

Total Crop Costs: 398.24 33.65 199.50 = 631.39 Total crop costs

Overhead Costs: 288.00 Apportionment for two 350' beds, see Worksheet 1.

Total Costs:

Crop & Overhead Total: 919.39 Total costs per two 350' beds

CROP BUDGET PART 3

Sales:

	# of units	Price per unit	Total \$
Retail:	10.00	50.00	500.00
Wholesale:	40.00	25.00	1000.00
Other:			0.00
Total units	50.00		
Total Sales:			1500.00 For two 350' beds

Net Profit:

Total sales – total costs =

Net profit for two 350' beds (1/10 acre)

Net Profit/Acre:

Standardize to one acre

Cost/Unit:

Total cost/total units

Net Profit/Unit:

Net profit/total units



Crop Enterprise Budget

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Crop Year:

Crop: **Cabbage** Unit Area: **Two 350' beds**

Note: Twenty 350' beds = 1 acre

and specify: early, mid, late Bed feet or acres: **700' or 1/10A**

Today's Date:

Rows per bed & plant spacing: **2 rows/bed, 16" apart, no mulch**

Costs in \$:

Remember to prorate to unit area. Field: **_____**

\$ _____ \$ _____ \$ _____

Prepare Soil:

- Disk 1x
- Chisel 1x
- Rototill 1x, 2x
- Bedform 2x
- Fertilizer
- Manure, compost
- Other
- Plastic mulch

Labor cost	Machinery cost	Product cost
1.26	0.73	
2.51	0.74	
5.02	1.48	
1.26	0.68	10.00
2.52	1.02	25.00

NOTES: Labor at \$12.55/hr. See Worksheet 1. Figures below are for two 350' beds
 1A at a time: 1 hr total for 20 beds = 6 mins/2 beds; \$1.26L, \$0.63 + .10 = \$0.73M w/ JD 2240; see Worksheet 4
 5A at a time: 1 hr total for 10 beds = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M w/ Ford 4000; see Worksheet 4
 5A at a time: 2 hrs total for 10 beds = 24 mins/2 beds; \$5.02L, \$1.28 tractor + .52 tiller = \$1.80M w/ Ford 4000
 5A at a time: 1 hr total for 10 beds = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M for ONE pass w/ Ford 4000
 500 lbs 4-3-3/A at a time: 1 hour total for 20 beds = 6 mins/2 beds; \$1.26L, \$0.63 + .05 = \$0.68M, \$10Pr w/ JD 2240
 1A at a time: compost at \$25/yd, 10 yds/A; 2 hrs total for 20 beds = 12 mins per 2 beds; \$2.51L, \$1.26 + .75 = \$2.01M, \$25Pr w/ JD 2240
 5A at a time: 1.5 hr/A laying = 10 mins/2 beds; \$2.09L, \$0.53 + .17 = \$0.70M, \$20Pr w/ Ford 4000

Seed/Transplant:

- Seeding in field
- Cost of transplants
- Transplanting labor

		63.00
25.23		

2 beds at a time: 30 mins/2 beds total = \$6.28L
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Cultivation:

- Reemay on/off
- Hoing 1x, 2x, 3x
- Hand weeding 1
- Hand weeding 2
- Hand weeding 3
- Straw mulch
- Irrigating 1x
- Tractor cultivating 6x
- Side-dressing
- Spraying
- Flame weeding
- Other

25.10		
50.20		
25.10		
7.53	8.37	
7.56	3.48	
2.51	0.74	6.00

For 2 beds: \$105G uses = \$35Pr, .75 hr laying = \$9.41L
 at \$12.55/hr: average 1 hr/2 beds \$12.55/2 beds
 at \$12.55/hr: average 8 hrs/2 beds \$100.40/2beds
 at \$12.55/hr: average 4 hrs/2 beds \$50.20/2beds
 at \$12.55/hr: average 2 hrs/2 beds \$25.10/2beds
 40 bales at \$3, 1 hr/2 beds; \$12.55L, \$120.00Pr
 \$7.53L, \$8.37M per 2 beds, each use, w/ JD 2240
 1A at a time: 1 hour/A = 6 mins/2 beds; \$1.26L, \$0.53 + .05 = \$0.58M per pass w/ Cub mostly
 Spin 500 lbs 4-3-3/A, 1 hr total/20 beds = 6 mins/2 beds; \$1.26L, \$0.32 + .05 = \$0.37M, \$10Pr w/ Ford 4000
 1 hr, 5A total time = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M, \$6Pr w/ Ford 4000
 10 beds/hr = 12 mins/2 beds; \$2.51L, \$0.64 + .10 = \$0.74M, \$6Pr w/ Ford 4000

Pre-harvest Subtotal:

155.80	17.24	104.00
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Harvest:

Total yield for two 350' beds = **50 cases**
 Total hours to harvest two 350' beds = **6.25 hrs**

900 heads: 50 18-count or 50-lb cases
 at 8 cases/hr

- Field to pack house
- Pack house to cooler
- Bags, boxes, labels
- Delivery

78.44		
62.75		
		78.50
30.12	9.60	

at \$12.55/hr 6.25 hrs
 at \$12.55/hr at 10 50-lb cases/hr
 \$0.25/bag, \$1.00/box, \$0.07/label at \$1.57/cabbage box
 See Worksheet 1.

Post Harvest:

- Mow crop
- Remove mulch
- Disk
- Sow cover crop: spinner
- Sow cover crop: Brillion
- Other

2.09	0.70	
1.26	0.73	
1.26	0.68	8.00

6 beds at a time: 10 mins/2 beds; \$2.09L, \$0.53 + .17 = \$0.70M w/ Ford 4000
 1 hour/2 beds: \$12.55L
 \$1.26L, \$0.63 + .10 = \$0.73M w/ JD 2240, see disk above.
 1A at a time: 1 hr/20 beds = 6 mins/2 beds; \$1.26L, \$0.63 + .05 = \$0.68M, \$8Pr w/ JD 2240
 1A at a time: 2 hrs/20 beds = 12 mins/2 beds; \$2.51L, \$1.26 + .20 = \$1.46M, 8Pr w/ JD 2240

Post-harvest Subtotal:

331.72	28.95	190.50
--------	-------	--------

= 551.17 Harvested cost for 2 beds

Marketing Costs:

- Labor: sales calls for season (for this crop only)
- Commissions
- Farmers' market expense

6.28		
60.24	4.70	9.00

Average 10 mins/week for 3 weeks: .5 hr

Commissions, if any, to growers' co-op, broker, or salesperson
 See Worksheet 1.

Total Crop Costs:

398.24	33.65	199.50
--------	-------	--------

= 631.39 Total crop costs

Overhead Costs:

288.00

Apportionment for two 350' beds, see Worksheet 1.

Total Costs:

Crop & Overhead Total: 919.39

Total costs per two 350' beds

Sales:

- Retail
- Wholesale
- Other
- Total units

# of units	Price per unit	Total \$
10.00	50.00	500.00
40.00	25.00	1000.00
		0.00
50.00		

Total Sales:

1500.00 For two 350' beds

Net Profit:

Total sales - total costs = 580.61

Net profit for two 350' beds (1/10 acre)

Net Profit/Acre:

5806.10

Standardize to one acre

Cost/Unit:

18.39

Total cost/total units

Net Profit/Unit:

11.61

Net profit/total units

NOTES:



EXPENSES- LABOR AND DELIVERY

Worksheet 1

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Labor, Delivery, Farmers' Market, and Overhead Costs to Use in Calculating Crop Budgets

Labor Costs:
 Average hourly rate:
 Employee taxes: 7.51%
 Workers' comp: 8%
 Nonassigned time: 10%
 SEP-IRA: 25%
Labor costs/hour:

Manager	Crew	Composite crew 1:3
10.00	10.00	10.00
0.75	0.75	0.75
0.80	0.80	0.80
1.00	1.00	1.00
		0.00
12.55	12.55	12.55

Labor costs are critical to calculating crop budgets. The farm's labor cost per hour is more than the employee's wage when employer taxes, workers' comp insurance, and nonproduction time (meetings, cleanup, maintenance) are added in. The SEP-IRA is an optional retirement plan, which is an added cost for certain qualifying employees (see chapter 6). If a farm manager is at a different pay rate, a composite rate per hour can be used. This worksheet assumes a ratio of 3 crew workers to 1 manager. For simplicity, all labor is paid the same rate in these crop budgets.

Delivery Costs:
 Labor: load truck(s) and travel
 Vehicle(s) cost at .40/mile

 Cost for one delivery
 % of crop to total load
 x number of trips
Delivery cost for crop per season:

Produce	
25.10	@12.55/hr
8.00	20 miles round trip
33.10	
10%	for example
12	for example
39.72	

Delivery costs can be determined for each trip, total trips per season, or the percentage cost of each product delivered. If a delivery contains equal amounts of carrots and beets, 50% of the delivery cost would be allotted to each crop.

MARKET COSTS

Farmers' Market Costs:

Labor: load truck(s)	12.55
Labor: travel to market, set up	50.20
Labor: market vending	100.40
Labor: pack up, travel home, unpack, tally sales	37.65
Vehicle(s) cost at .40/mile	8.00
Rental fees	30.00
Amortized FM equipment	7.67
Subtotal, cost for one market:	246.47
# of markets where crop is sold	6
Total costs for # of markets	1478.82
Crop sales/total FM sales	5%
Crop sales % x total market costs:	73.94

Calculate for ONE market

1 hr (2 people @.5 hr each)
4 hrs (2 people)
8 hrs (2 people)

3 hrs (2 people)
20 miles round trip
per market

scales \$1500, umbrellas \$400, tables \$200, signs \$200 =

\$2300/15-year useful life/20 markets per season = \$7.67 per market

varies by crop

varies by crop

Enter in Crop Enterprise Budget under
"Marketing Costs: Farmers' market expense"

The base cost for attending one market is constant irrespective of the amount of product sold (unless labor needs change). Gross sales at market must be higher than the cost; otherwise, you are losing money or personally subsidizing the market cost by not paying yourself the going labor rate. Sales need to be high enough to justify the cost of vending at market. If they are not, strive for higher sales or pursue alternative selling venues, such as CSA programs or wholesale accounts.

The total expense for equipment needed at market is amortized over the useful life of the equipment and prorated for each market. As with delivery costs above, a percentage of farmers' market expense can be assigned to different crops. The important message regarding farmers' market costs, though, is that each market costs a certain amount to attend, and that farmers' market sales must justify that expense.

EXPENSES- OVERHEAD

Overhead Costs (annual)

Overhead costs are ones not accounted for in delivery costs, farmers' market costs, greenhouses, tractors, implement, or irrigation costs. Overhead costs are spread out over the entire farm operation and prorated to each crop or enterprise. In these worksheets, 75% of overhead expenses are apportioned to the 5 acres in cultivation, 12.5% to the bedding-plant greenhouse, and 12.5% to the in-ground tomato greenhouse. Allotment of overhead costs is somewhat subjective, but all overhead costs must be assigned. Overhead expenses allotted to the cultivated 5 acres is further broken down to overhead expense per two 350'-long beds, the equivalent of 1/10 acre.

Mortgage annual payment	600.00	farm % of total bill. Does not include house and house site portion.
Depreciation	2000.00	to account for replacement costs, excluding machinery in Worksheet 4
Property taxes	800.00	farm %
Insurance	4000.00	\$3000 health, \$1000 fire; not vehicle or workers' comp.
Office	1100.00	supplies, postage, subscriptions
Website	400.00	\$20/month plus fees and maintenance
Travel/conferences	300.00	
Professional services	700.00	CPA, organic certification, snowplowing
Electric	600.00	farm %, w/o greenhouse electrical use
Landfill	250.00	
Telephone	550.00	farm %
Advertising	200.00	
Shop supplies, misc. repairs	500.00	tractor, implement, irrigation repairs already accounted for in Worksheet 4
Labor: management	3263.00	average 5 hrs/week, 260 hrs/year; annual labor for overseeing farm operation
Labor: office	3263.00	average 5 hrs/week, 260 hrs/year; annual labor for office duties
Labor: maintenance	653.00	average 1 hr/week, 52 hrs/year; annual labor for nonassigned maintenance work
Total overhead costs:	19179.00	Allocation: GH seedlings \$2397, GH tomatoes \$2397, 5A (100 beds) \$14,385 = \$144 per bed
Overhead per two 350' beds:	288.00	Per two 350' beds, for 5A (100 beds) planted to row crops. Enter on line 69 on Crop Enterprise Budget.
Overhead per greenhouse:	2397.00	Per 21' x 96' hoophouse: one for bedding plants, one for greenhouse tomatoes

WORKSHEET 2- PLANT COST

Worksheet 2

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Greenhouse Flat Costs for Calculating Worksheet 3 Bedding-Plant Cost

Costs of Soil, Plastic Containers, and Labor Filling

In order to calculate what a farm-raised seedling costs, we first need to know the cost of the plastic container, the cost of the soil in the container, and the cost of labor to fill the container. Below is a table that lists common pack sizes used in greenhouse production and the associated costs with that size. A 1020 is a 10" x 20" open plastic tray. One 1020 tray will hold eighteen 3.5" square pots. A 606 is six 6-packs sized to fit a 1020 tray. An 804 is eight 4-packs sized to fit a 1020 tray. An 806 is a eight 6-packs sized to fit a 1020 tray. 128 and 98 stand for the number of molded individual cells in a 1020-sized tray. Reuse of plastic containers will lower costs.

	A	B	C	D: C/B	E	F	G: F/G	H: A + D + G
Container size	Single-use cost/flat	# of containers per yard of soil	Price per yard of soil	Cost of soil in container	# of flats filled per hour	Labor cost per hour	Cost of labor to fill flat	Total cost of plastic, soil, and labor (w/o 1020)
3.5" square pot (18/tray)	1.62	125	105	0.84	40	12.55	0.31	2.77
606	0.39	144	105	0.73	60	12.55	0.21	1.32
804	0.39	144	105	0.73	60	12.55	0.21	1.32
806	0.39	171	105	0.61	60	12.55	0.21	1.21
1020	0.72	100	105	1.05	60	12.55	0.21	1.98
128	0.95	216	105	0.49	60	12.55	0.21	1.64
98	0.95	216	105	0.49	60	12.55	0.21	1.64
6" pot: each pot	0.28	350	105	0.30	240	12.55	0.05	0.63

WORKSHEET 3- GREENHOUSE

Worksheet 3 Greenhouse Costs

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Two types of greenhouse operations are portrayed: one for growing bedding plants and one for growing in-ground tomatoes. Both greenhouses are 21' x 96' hoop houses with two layers of plastic that are inflated. Each has a furnace, exhaust fan, intake shutters, and automatic controls. The longer-lived structure and equipment costs are totaled and divided by their useful life (20 years). Annual costs of heating fuel, electricity, and 5-year plastic covers are listed separately. Overhead expenses from Worksheet 1 (12.5% of total overhead) are added in after the annual expense subtotal. The bedding-plant greenhouse is more involved and listed first. The bedding-plant greenhouse benches hold 1000 flats (1020 size), and two flats can occupy the same bench space during the course of the bedding-plant season (one cycling of inventory). Worksheet 2 lists costs for plastic containers, soil, and the labor to fill the containers, as shown under *Production costs per flat*. Other production costs per flat are listed, with optional categories like thinning and fertilizing left blank for simplicity. The total cost per flat is a very useful number and will be used in the Crop Enterprise Budgets when crops are raised from transplants.

Bedding Plants, March 1st Start-up

Structure cost: 21' x 96', 2-layer poly-covered hoop house

Frame cost \$2400, installation \$1004 (80 hrs), wood \$300	3704.00
Furnace \$2000, fans \$800, installation \$377 (30 hrs)	3177.00
Benches \$500, plumbing \$400, irrigation \$400	1300.00

Total structure cost 8181.00

divide by # years of useful life 20

Annual structure cost 409.05

Other annual expenses:

Poly cost \$600, installation \$100 (8 hrs), /5 years	140.00
Electricity 5 x \$15/month	75.00
Fuel for heat 300 gallons @ \$3/gallon	900.00
Watering labor 2 hrs x 50 times = 100 hrs	1255.00

Subtotal annual expenses 2370.00

Farm overhead allocation from Worksheet 1 2397.00

Total annual expenses with overhead allotment: 5176.05

Greenhouse 1020 capacity: 1000 x 2

Total annual expense/total flats =

2000	one cycling of bench space
2.59	per flat

Greenhouse annual cost/flat:

2.59	2.59	2.59
------	------	------

Production costs per flat:

Cost of plastic flat, soil, labor filling

Cost of seed in flat

Labor to seed flat: 12 flats/hr = \$1.05/flat

If needed: subtotal/# of finished trays

Labor: transplant to one flat: 10 flats/hr = \$1.26

2nd plastic flat, soil, labor filling

Subtotal for transplanted flat

Labor moving: 60 flats/hr = \$0.21/flat each move

Labor to thin: 100 flats/hr = \$0.13/flat

Fertilizer cost: \$0.02/flat

Fertilizer labor: \$0.05/flat

804s	3.5" sq. pots	128s
1.32	2.77	1.64
1.00	1.00	1.00
1.05	1.05	1.05
0.21	0.21	0.21
6.17	7.62	6.49

Total cost per flat:

WORKSHEET 4- TRACTOR

Worksheet 4 Tractor, Implement, and Irrigation Costs

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Tractor Costs

The hourly cost of a tractor is calculated by first dividing the purchase price of the tractor by the tractor's years of useful life. Next, annual expenses for repairs and fuel are added in, giving you the total cost to own and operate the tractor per year. Divide this total annual cost by the number of hours the tractor runs in a year, and the result is an average cost per tractor hour. I was surprised at first at how inexpensive running a tractor can be, but remember, a tractor used 50 hours per year has a much higher hourly rate than a tractor used 300 hours per year. The three tractors shown below are ones that I have owned, and the numbers are based on personal experience. Annual repairs are listed as an average: some years are expensive, some are not.

Tractor model	JD 2240	Ford 4000	Cub
<i>Original cost/useful life</i>	7000/25	4400/25	1000/25
Annual cost, w/o interest	280.00	176.00	40.00
Average annual repairs	500.00	300.00	200.00
Annual fuel cost @ \$3/gallon	480.00	480.00	80.00
Total annual cost	1260.00	956.00	320.00
Hours used annually	200	300	60
Tractor cost/hour	6.30	3.19	5.33
Tractor driver hourly rate	12.55	12.55	12.55
Tractor with driver: \$/hour	18.85	15.74	17.88

some years \$0, some lots

WORKSHEET 4- IMPLEMENT AND IRRIGATION

Implement Costs

Tracking various implements' costs is similar to tracking costs of tractors but without the fuel expense. Some implements have lots of moving parts (e.g., combines, manure spreaders) and cost more to operate than implements like a bedlifter, which has no moving parts. I list three of the more common and costly implements to run. Because a farm may have numerous implements, I make a note below these three implement costs for easy calculations to use as a shortcut for budget work.

	PTOTiller	Manure Spreader	Brush Hog
<i>Original cost/useful life</i>	800/25	1100/20	600/20
Annual cost, w/o interest	32.00	55.00	30.00
Implement annual repairs, average	20.00	20.00	20.00
Annual hours used	40	20	50
Implement cost/hour	1.30	3.75	1.00

A \$500 simpler implement with a useful life of 25 years costs about \$20/year to own. Figure \$.50/hour for quick calculating.

A \$1000 simpler implement with a useful life of 25 years costs about \$40/year to own. Figure \$1/hour for quick calculating.

Irrigation Costs

Irrigation costs take into account the annual equipment cost and any repair expense (similar to tractors and implements) and also time for setting up, running, and taking down (or moving) the system, calculated for the area that is watered each time. The example below shows an irrigation system that waters an acre in area and is used four times per season. The irrigation cost per acre is then calculated for 1/10 of an acre, or two 350'-long beds.

Cost of pipe, pump, sprinklers	4600.00
Useful life in years	25
Annual equipment cost	184.00
Average annual repairs	50.00
<i>Total annual cost</i>	234.00
Total annual cost/uses per season	58.50
Setup, takedown labor per irrigation area	75.30
4 hours tractor use	25.20
Irrigation costs/irrigated area, each use	159.00
Irrigation costs for two 350' beds, each use	15.90

used PTO (power take-off) pump, 4" and 2" aluminum pipe for 1 acre

say \$250 every 5 years

4 uses per season

1A coverage, 6 hrs total @ \$12.55/hr
at \$6.30/hr, tractor only

per acre

\$7.53 labor, \$8.37 machinery

TRACKING INCOME/SALES

Be Crop Specific

	Farmers' Market	Grocery Store	CSA	Other	Total
Beets	\$480	\$650	\$400	\$150	\$1,680
Carrots	\$890	\$2,100	\$1,000	\$600	\$4,590
Lettuce	\$1,310	\$1,140	\$1,400	\$960	4,810
Potatoes	\$1,100	\$3,250	\$980	\$850	\$6,180
Total	\$3,780	\$7,140	\$3,780	\$2,560	\$17,260

INDEX OF PROFITABILITY

Complicated name, simple idea

What does it tell you?

- grow more of those things early on the list
- maybe grow less of those things late on the list or look for **innovations that might help increase profitability**
- what works for you?

CROP BUDGETING

Crop Budgets:	Net Profit per 1/10 Acre	Extrapolated to Net Profit/Acre
Basil: bunches	\$3,560	\$35,603
Beans: bush	-272	-2,720
Beets: roots	825	8,253
Broccoli	116	1,157
Cabbage	581	5,806
Carrots: roots	1,405	14,046
Celeriac	1,366	13,659
Cilantro: bunches	1,656	16,561
Corn: sweet	-192	-1,922
Cucumbers	153	1,531
Dill: bunches	1,623	16,232
Kale: bunches	2,463	24,630
Lettuce: heads	791	7,905
Onions	611	6,110
Parsley: bunches	4,742	47,425
Parsnips	1,384	13,844
Peas: snap	-217	-2,165
Peppers: bell	1,556	15,556
Potatoes	261	2,610
Spinach	1,015	10,147
Squash: summer	787	7,867
Squash: winter	87	869
Tomatoes: field	1,872	18,724

Sample Index of Profitability

PARSLEY: BUNCHES

BASIL: BUNCHES

KALE: BUNCHES

TOMATOES: FIELD

CILANTRO: BUNCHES

DILL: BUNCHES

PEPPERS: BELL

CARROTS: ROOT

PARSNIPS

CELERIAC

SPINACH

BEETS: ROOTS

LETTUCE: HEADS

SQUASH: SUMMER

ONIONS

CABBAGE

POTATOES

CUCUMBERS

BROCCOLI

SQUASH: WINTER

CORN: SWEET

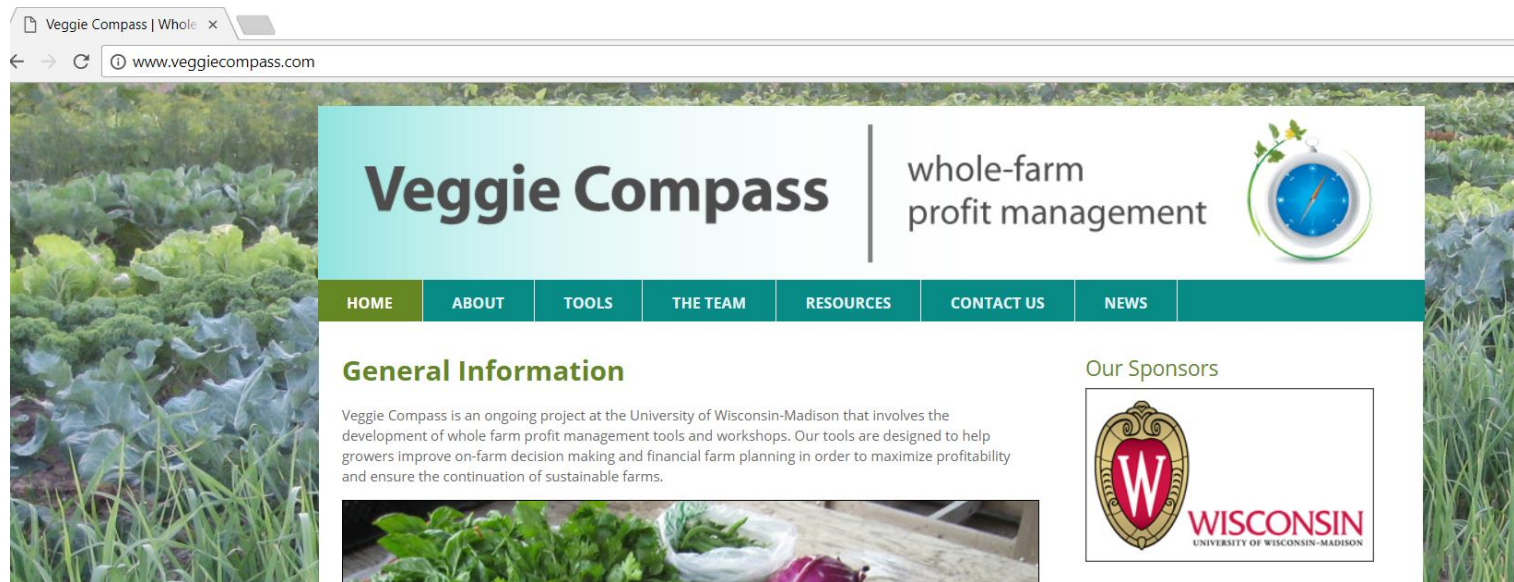
PEAS: SNAP

BEANS: BUSH

ENTERPRISE BUDGET TEMPLATES

Veggie Compass

www.veggiecompass.com



CASH FLOW BUDGET TEMPLATES

Cultivate KC Spreadsheet

<http://www.douglas.k-state.edu/commercial-horticulture/finances.html>



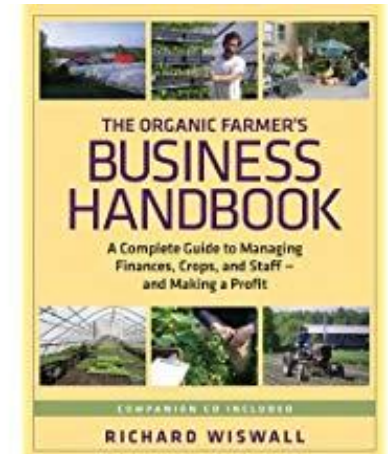
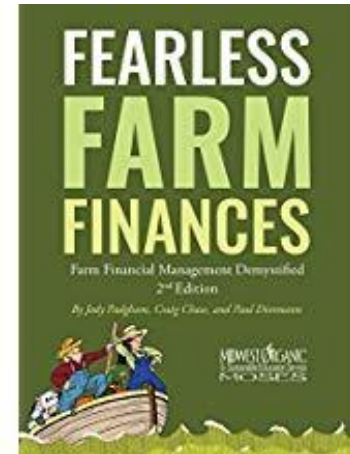
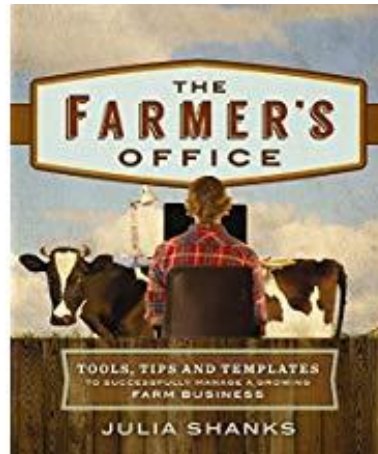
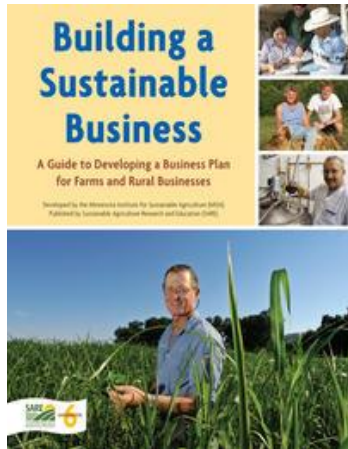
BALANCE SHEET AND INCOME STATEMENT

Table 1. Balance Sheet and Income Statement Highlights

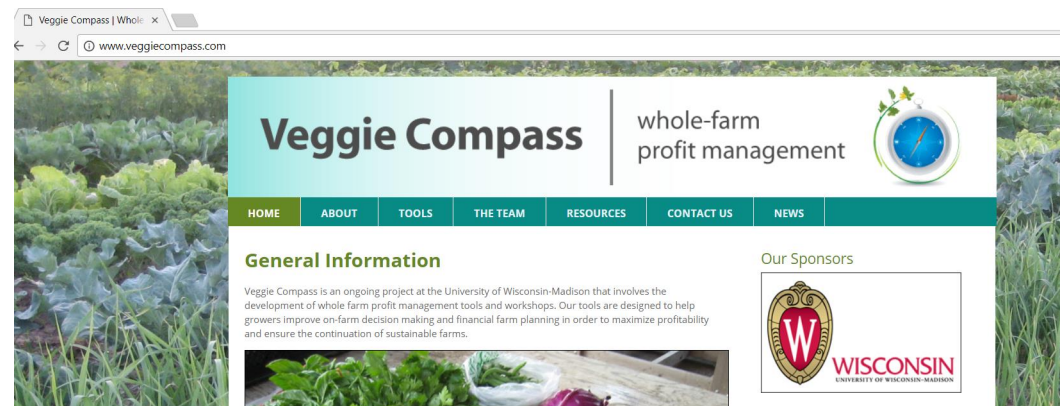
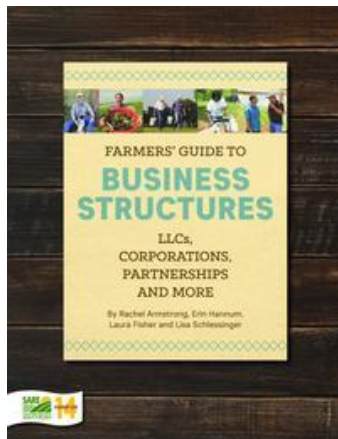
Financial Measures 12/31/2007			
Balance Sheet		Income Statement	
Current assets	8,500	Gross revenue	60,000
Current liabilities	4,200	Operating expenses	16,250
Total assets	70,000	Labor (paid)	12,500
Total liabilities	42,000	Interest expense	3,750
		Depreciation expense	2,000
		Net farm income	25,500

<https://www.extension.iastate.edu/agdm/wholefarm/>

RESOURCES



Sare.org



K-STATE
Research and Extension

Douglas County



MAKE DATA DRIVEN DECISIONS

- Use your records and financial management tools to guide your decisions
- Make it realistic
- Remember to pay yourself
- Don't make it too complicated

KANSAS SPECIALTY CROP GROWERS ASSOCIATION



KANSAS SPECIALTY CROP
GROWERS ASSOCIATION

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About

The Kansas Specialty Crop Growers Association (KSCGA) aims to advance Kansas' specialty crop production through a network of growers who are equipped with the technical assistance, education, and empowerment they need to succeed. By partnering with K-State Research and Extension, Kansas State University and the Kansas Department of Agriculture, members receive benefits that include:

- **Production Technical Assistance:** Soil health, plant pathology, disease management, IPM, crop selection and rotation, food safety, and etc.)
- **Advocacy Resources:** Educational resources on federal and state policies that affect farming, local food systems and the environment



KSCGA

First post for the Kansas Specialty Crop Growers Association. Updates to come!

2 months ago

QUESTIONS?

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