



Record Keeping

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North Carolina State University



Introductions

- Agriculture Economist for over 20 years
- Two masters: Agricultural Economics and Extension Education
- Currently Extension Associate in Agricultural and Resource Economics Department at NCSU.
 - Work focuses on new agribusiness development and financial management.
- Worked as Farm Management Specialist in Illinois
- Have worked in Africa and South America for many years
 - Grow up on farm in near Berea Kentucky
 - Vegetables and Cattle



Workshop Overview

Today's Ground Rules

Success depends upon open discussion...

- Ask your questions – anytime!
 - Share your insights
 - Learn from each other



- **Profit** = Income – Expenses

**SCHEDULE F
(Form 1040)**

Profit or Loss From Farming

OMB No. 1545-0074

2011
Attachment
Sequence No. **14**

Department of the Treasury
Internal Revenue Service (99)

▶ Attach to Form 1040, Form 1040NR, Form 1041, Form 1065, or Form 1065-B.
▶ See instructions for Schedule F (Form 1040).

Name of proprietor: **I. M. HOPEFULL** Social security number (SSN): **321-88-7777**

A Principal crop or activity: **VEGETABLES AND CUT FLOWERS** **B** Enter code from Part IV: **111210** **C** Accounting method: Cash Accrual **D** Employer ID number (EIN), if any:

E Did you "materially participate" in the operation of this business during 2011? If "No," see instructions for limit on passive losses. Yes No
F Did you make any payments in 2011 that would require you to file Form(s) 1099 (see instructions) Yes No
G If "Yes," did you or will you file all required Forms 1099? Yes No

Part I Farm Income—Cash Method. Complete Parts I and II (Accrual method. Complete Parts II and III, and Part I, line 9.)

1a Specified sales of livestock and other resale items (see instructions)			
b Sale of livestock and other resale items not reported on line 1a		3,125	
c Total of lines 1a and 1b (see instructions)		3,125	
d Cost or other basis of livestock or other items sold		1,900	
e Subtract line 1d from line 1c			1e 1,425
2a Specified sales of products you raised			2a 0
b Sales of products you raised not reported on line 2a			2b 24,500
3a Cooperative distributions (Form(s) 1099-DIV)			3b 100
4a Agricultural program payments (see instructions)			4b
5a Commodity Credit Corporation (CCC) loan proceeds			5a
b CCC loans forfeited			5c
6 Crop insurance proceeds and federal crop loan proceeds			6b
a Amount received in 2011			6d
c If election to defer to 2012 is attached, check here: <input type="checkbox"/> Yes <input type="checkbox"/> No			7a
7a Specified custom hire (machine work) income (see instructions)			7b
b Custom hire income not reported on line 7a			8a
8a Specified other income (see instructions)			8b 0
b Other income not reported on line 8a (see instructions)			9 26,025
9 Gross income. Add amounts in the right column (lines 1e, 2a, 2b, 3b, 4b, 5a, 5c, 6b, 6d, 7a, 7b, 8a, and 8b). If you use the accrual method, enter the amount from Part III, line 50 (see instructions)			

Income
livestock \$1,425
Crops \$24,500

Part II Farm Expenses—Cash and Accrual Method. Do not include personal or living expenses (see instructions).

10 Car and truck expenses (see instructions)	10	9,115	23 Pension and profit-sharing (see instructions)	
11 Chemicals		350	24 Depreciation (see instructions)	
12 Crop production expenses (see instructions)			25 Fuel	3,500
13 Depreciation on other property (see instructions)			26 Insurance (see instructions)	3,500
14 Fuel		1,078	27 Interest (see instructions)	1,500
15 Insurance (see instructions)			28 Repairs and maintenance (see instructions)	450
16 Interest (see instructions)		1,000	29 Telephone (see instructions)	600
17 Repairs and maintenance (see instructions)		650	30 Travel (see instructions)	500
18 Telephone (see instructions)			31 Utilities (see instructions)	1,000
19 Travel (see instructions)		2,000	32 Other expenses (see instructions)	5,000
20 Utilities (see instructions)		650	a Mortgage (paid to or for the proprietor)	3,850
21 Interest:			b Other	1,200
a Mortgage (paid to or for the proprietor)	21a	3,850	22 Labor hired (less employment credits)	22
b Other	21b	1,200	d Depreciation on equipment	32d
22 Labor hired (less employment credits)			e Depreciation on other property	32e
23 Pension and profit-sharing (see instructions)			f Other	32f
24 Depreciation (see instructions)			33 Total expenses. Add lines 10 through 32f. If line 32f is negative, see instructions	33 32,488
25 Fuel			34 Net farm profit or (loss). Subtract line 33 from line 9.	34 -6,463

Expenses
\$32,400

What expense not included in Schedule F?

35 Did you receive a subsidy in 2011? (see instructions) Yes No
36 Check the box that describes your investment in this activity and see instructions for where to report your loss.
a All investment is at risk. **b** Some investment is not at risk.



Purposes of Measuring

- **Taxes** - Schedule F is not a Profit and Loss Statement.
- **Communicating Externally** (Banks, FSA, Owners)
==> Schedule F (P&L), Balance Sheet and Cash Flow.
- **Management** - Re-organize financial data & add:
 - Sales data.
 - Field data.
 - Organic records
 - Nutrient management plans.

 Our focus.



Farm Management

*The basis upon which business decisions are made should reflect the **Goals, and Values** of that farm business*



SMART Goal Attributes

- **S**pecific
- **M**easurable
- **A**ttainable but challenging
- **R**ewarding
- **T**ime Bound



Farm Goal

We would like our farm to make \$35,000 net profit in 2013.



Exercise

**Three goals
for your farm**



Farm Goal

We would like our farm to make \$35,000 net profit in 2013.

- What information do we need to know?
 - Gross sales
 - Amount vegetables or animals sold
 - Prices sold each sold
 - What inputs needed for production
 - Labor
 - Equipment
 - Fertilizer
 - Seed
 - What machinery and equipment needed?

Record Keeping Allows You See Progress Toward Goals

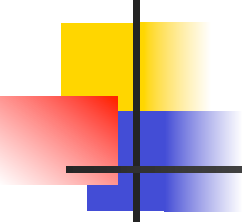




Monitoring and Control Requires:

- Identifying factors critical to success
- Measuring performance
- Defining standards of expected performance
- Comparing actual and expected performance
- Assessing need for and type of adjustment

Determining What to Measure

- 
-
- What information is needed to determine how stakeholders see us?
 - If the information is gathered, how will it affect the decision-making process?
 - When should the measures be taken to be useful?



Example Measures

- Financial
 - Operating Profit Margin, Asset Turnover Ratio, Return on Equity, Return on Assets, etc.
- Customer
 - Quality, delivery, # of complaints, etc.
- Internal
 - Planting and harvesting timing, weed control, employee satisfaction, etc.
- Innovation and Learning
 - # of seminars attended, R&D investment (evaluation of new products, processes, etc.), etc.



Defining Standards of Performance

- Benchmarking
 - Looking for those businesses that are the best at doing something and learning how they do it so that we might emulate their methods



Benchmark

Compare Results to Benchmark

	% of Sales	Per Acre
Net Profit	13% - 15%	\$2,400 - \$2,600
Interest (overhead)	1% - 2%	\$300 - \$350
Rent (overhead)	2% - 3%	\$325 - \$375
Repairs (overhead)	5% - 6%	\$850 - \$1,000
Insurance (overhead)	1% - 2%	\$300 - \$350
Total Overhead	24% - 26%	\$3,900 - \$4,300
Gross Margin (after COGS)	40% - 42%	\$6,600 - \$6,900
Total Cost of Goods (COGS)	58% - 60%	\$9,500 - \$10,000
Hired Labor Expense (hybrid)	33% - 35%	\$6,200 - \$6,500
Crop Inputs (COGS)	15% - 17%	\$2,500 - \$2,700
Purchases for Resale (COGS)	7% - 9%	\$1,200 - \$1,600
Sales		\$18,000 - \$20,000



Gross Income Per Acre



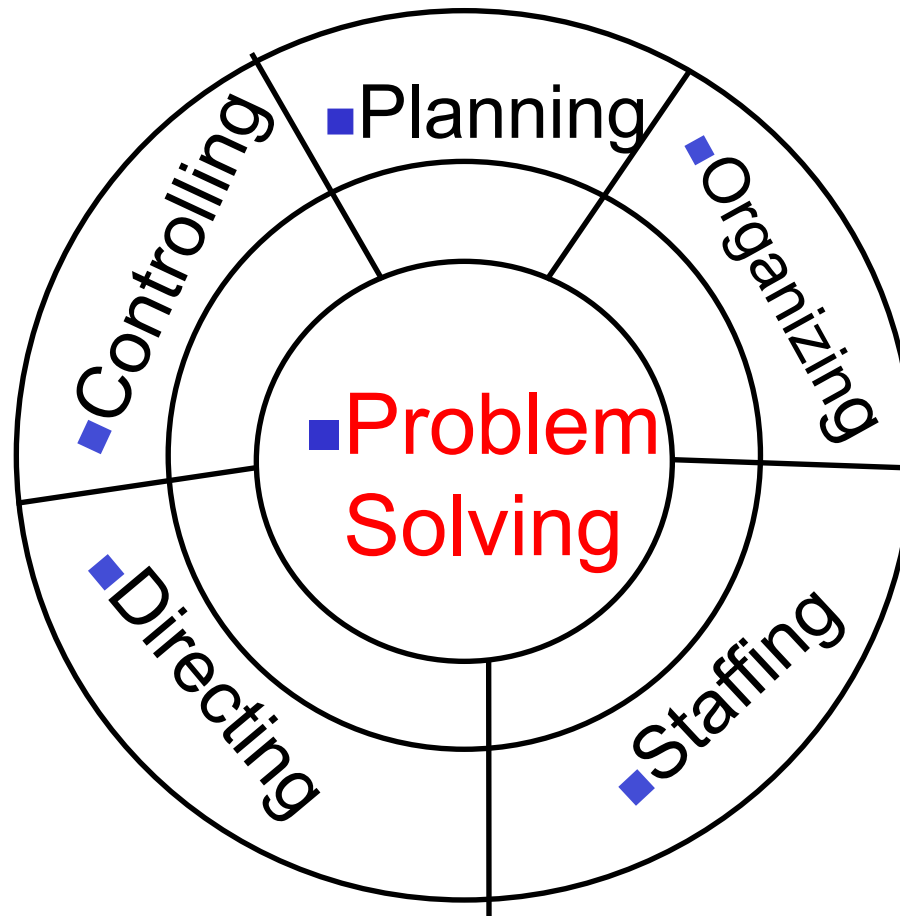
Farm Scale	Range	Average
<3 acres	\$8,888-\$25,605	\$15,623
3 to 6 acres	\$9,941-\$15,100	\$12,658
6-12 acres	\$6,750-\$14,466	\$11.36
>12 acres	\$6,750-\$14,446	\$10,810

Net Cash Income Per Acre



Farm Scale	Range	Average
<3 acres	\$1,854-\$9,487	\$5,664
3 to 6 acres	\$1,767-\$8,547	\$5,903
6-12 acres	\$1,331-\$5,842	\$3,550
>12 acres	\$1,103-\$7,430	\$3,757

■ *Management Functions*





Problem Identification

- Recognize internal & external factors

→ Controllable vs.
Uncontrollable factors



Business Environment

- Things I have direct control over -- “Things I Manage” --
Internal
- Things I have no control over -- “Things I manage around” --
External



Record Keeping Basics

- Functions of recordkeeping
- Who should keep your records
- Do you need an accountant
- Accounting Software
- Simplicity is important
- When to start



Cash VS Accrual Accounting

- **Cash Accounting:** Reporting of your revenues and expenses at the time they are actually received or paid
- **Accrual Accounting:** The recognition of revenues and expenses at the time they are earned or incurred, regardless of when cash for transaction is received or paid out



Single and Double Entry Systems

- **Single entry system:** Using only income and expenses accounts, as well as some of the other records listed on general records.
- **Double entry system:** Every transaction is recorded as a debit and credit. A sale could be both a delivery and a receipt of payment



Essential Records for Business

Keep your records as simple as possible

- Record Book (receipts and expenses record)
- Invoices and sales receipts
- Bills to pay
- Accounts receivable
- Inventory reports
- Market sales
- Production Records
- Depreciation schedule
- Labor records
- Family Living Expense records
- Financial Statements
 - Balance sheet
 - Income statements
 - Cash Flow statements
- **Business checkbook**



Getting Started

- **NEED SEPARATE FARM ACCOUNT**
- Level of detail and number of enterprise accounts (profit centers)
- Accounting period
- Pay all farm bills by check
- Deposit all income
- Avoid using business account to pay personal expenses



Getting Started

- **NEED SEPARATE FARM ACCOUNT**
- Balance your bank account each month
- Keep your bank statements and cancelled checks at least three years.
- Never write a check for cash

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F Did you make any payments in 2011 that would require you to file Form(s) 1099 (see instructions) Yes No
G If "Yes," did you or will you file all required Forms 1099? Yes No

Part I Farm Income (See instructions for Cash Method, Specific Report, and All Methods, and Complete Parts II and III, and Part I, line 9.)

1a Specified sales or receipts			
b Sale of livestock			
c Total of lines 1a and b			
d Cost or other basis			
e Subtract line 1d from 1c			
2a Specified sales or receipts			
b Sales of products			
3a Cooperative distribution			
4a Agricultural program			
5a Commodity Credit Corporation			
b CCC loans forfeited			
6 Crop insurance proceeds			
a Amount received			
c If election to defer			
7a Specified custom			
b Custom hire income			
8a Specified other income			
b Other income not reported elsewhere			
9 Gross income. Add lines 1e, 2e, 3a, 4a, 5a, 6c, 7a, 8a, and 8b. If you use the cash method, see instructions.			

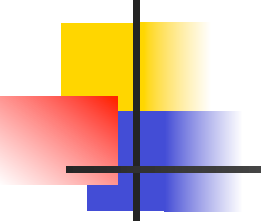
Part II Farm Expenses (See instructions.)

10 Car and truck expenses (see instructions). Also include depreciation			
11 Chemicals			
12 Conservation expenses (see instructions)			
13 Custom hire (machine and labor)			
14 Depreciation and amortization expense (see instructions)			
15 Employee benefit expenses (other than on line 23)			
16 Feed			
17 Fertilizers and liming materials			
18 Freight and truck expenses			
19 Gasoline, fuel, and oil			
20 Insurance (other than on line 6)			
21 Interest:			
a Mortgage (paid to lender)			
b Other			
22 Labor hired (less imputed family labor)			
23 Total expenses. Add lines 10 through 22.			
24 Net farm profit or loss. Subtract line 23 from line 9. If a profit, stop here. If a loss, see instructions.			

35 Did you receive a Schedule K-1 from a partnership, S corporation, or trust? Yes No

36 Check the box that applies: **a** All investments are in U.S. real property interests.

Use to develop expense categories
"Chart of Accounts"
Sales by market
Expenses
Fertilizer
Fuel and oil
Propane
Truck gas
Greenhouse supplies
Insurance: truck, farm, health
Interest
Rent paid
Repairs and maintenance
Seed, supplies
Taxes
Utilities



Defining Your Enterprises



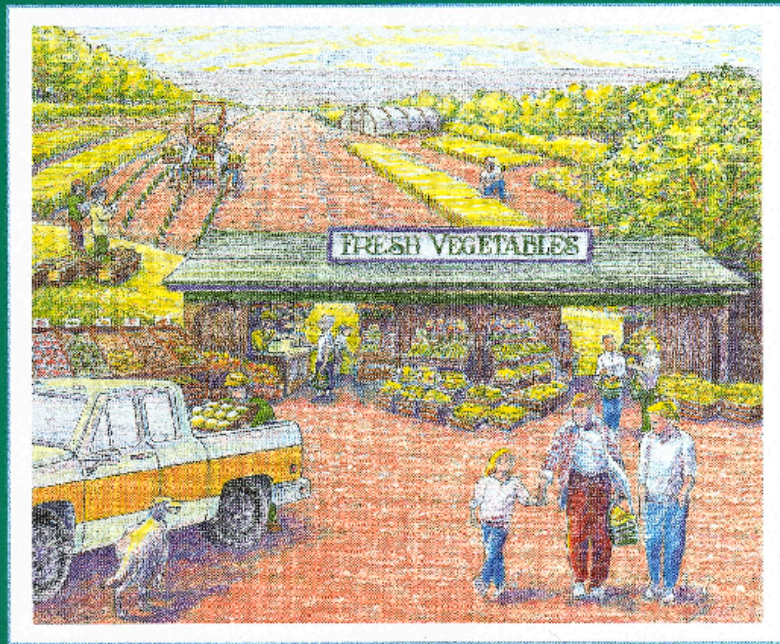
Each enterprise is a “**profit center.**”

You define them to fit your needs!

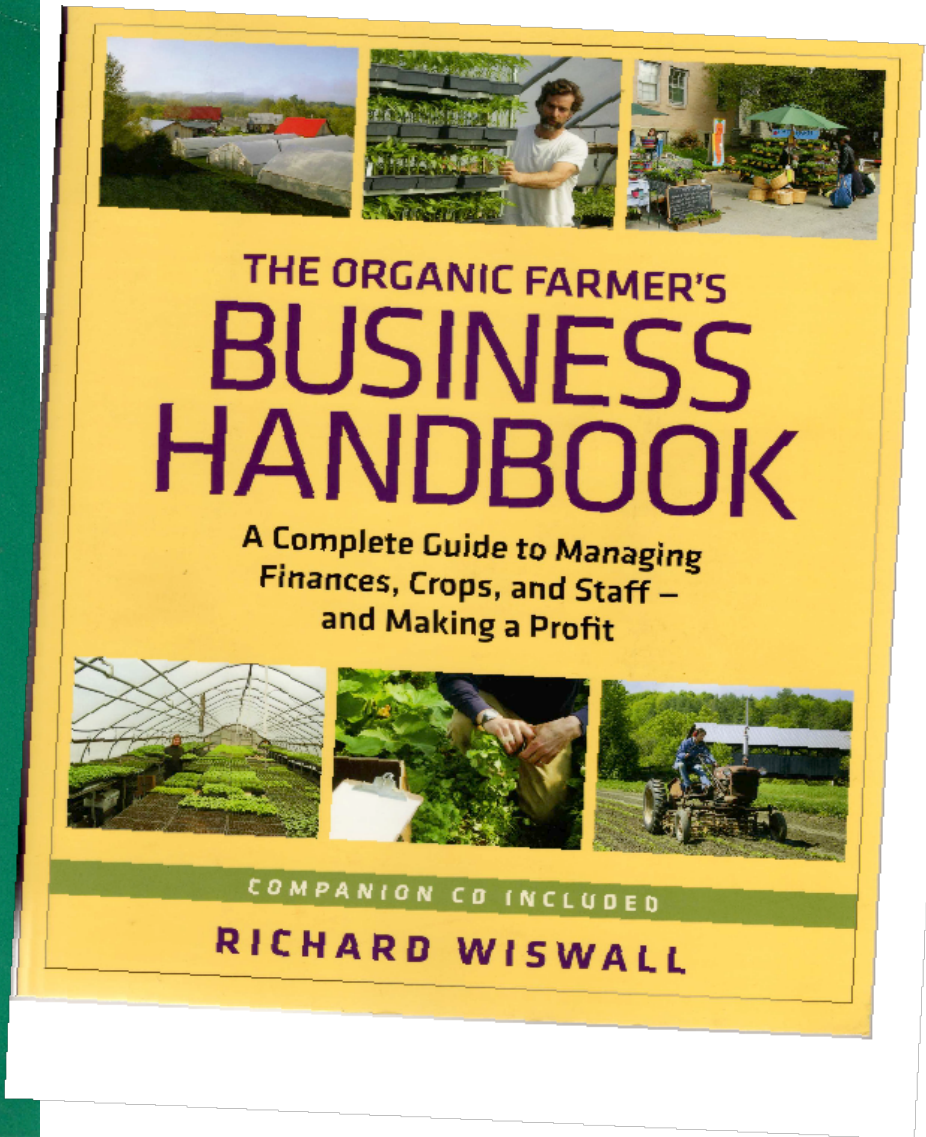
Examples might help:

1. Fruit crops – berries,
2. Vegetables – tomatoes, peppers, okra
3. Corn maze w/ snack bar, hayrides

Sustainable Vegetable Production From Start-Up to Market



Vernon P. Grubinger



Two Examples of Commercially Available
Individual Crop Cost Methods.

Crops Budgets*

*From: Organic Farmers Business Handbook
Richard Wiswall

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



- Crop Budget Examples

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Crop Budgets Analysis

- What are expenses compared to total revenue?
- How many labor hours required?
- When is labor needed?
- What are machinery cost?
- What is breakeven price?



Crop Budgets Analysis

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High Tunnel Budgets





Total Revenue

	LBS/Plant	Price
Tomato	12	\$2.00

480 plants per high tunnel
\$11,520



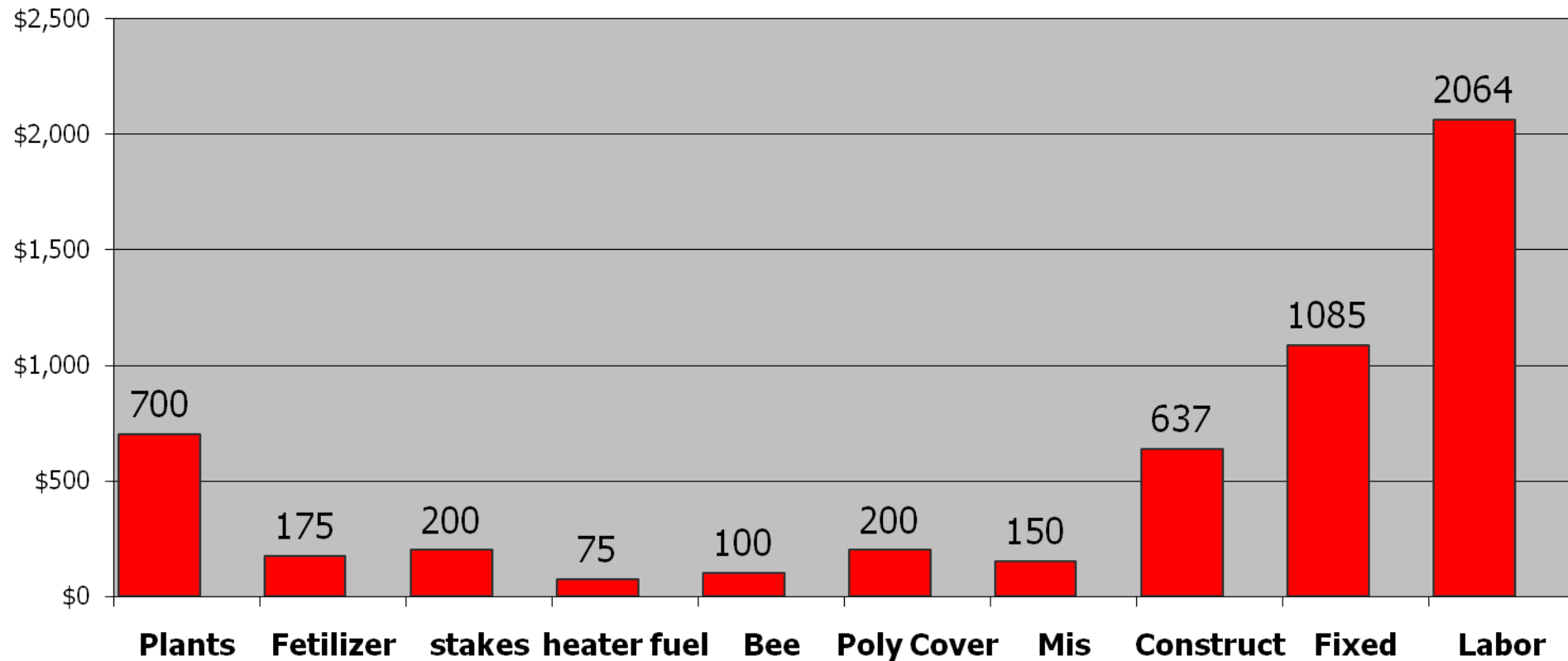


Total Cost

	Total	Per LB
Annualized Construction Cost	\$637	.11
Fixed cost (interest, taxes, land)	\$1,085	.188
Variable Cost	\$1,610	.279
Labor	\$2,064	.358
Total Cost	\$5,396	.935



High Tunnel Tomato Budget





Returns At Various Prices

	\$2.00/LB	\$1.50/LB	\$1.25/LB
Gross Returns	\$11,520	\$8,640	\$7,200
Variable Cost	\$3,674	\$3,674	\$3,674
Returns over Variable Cost	\$7,846	\$4,966	\$3,526
Fixed Cost	\$1,085	\$1,085	\$1,085
Returns over Total Cost	\$6,761	\$3,881	\$2,441



Breakeven Analysis

- Variable cost and labor \$3,674
 - \$3,674/yields of 5,760 LBS
 - Per acre price needed to cover variable costs = \$0.63
 - Total costs: $\$3,674 + \$1,722 = \$5,396$ /
High Tunnel
 - **Price needed to cover total costs = \$.94/LBS**



Allocation of Capital Assets Cost

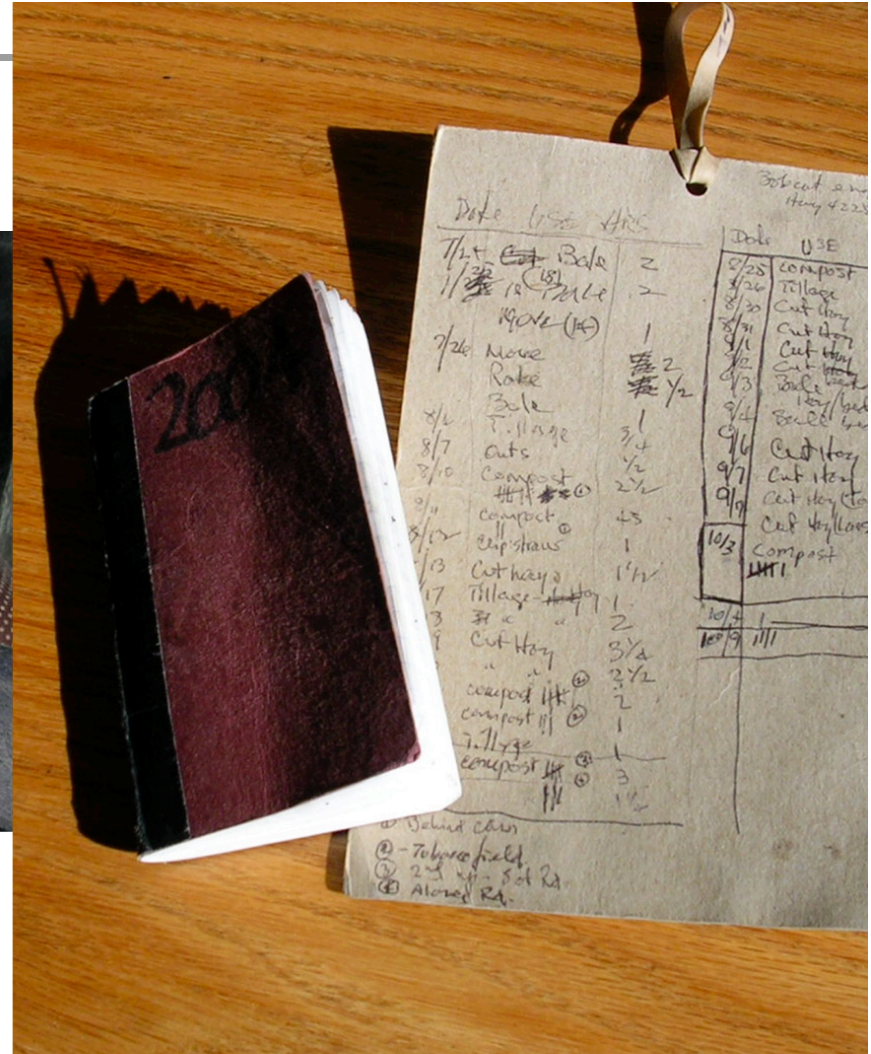
- Costs like buildings, machinery costs are difficult to allocate to a specific enterprise.
 - Percent of revenue
 - Percent of acreage

Tractor Costs

Organic Farmer Business Handbook

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

Measuring and Recording Machine Hours



Calculating an Hourly Cost of Machinery

Operating and Owning Cost for Significant Equipment

Equipment Designation	Total Hours Operation	Fuel/Energy	Three-Year Average Repair and Maintenance	Total Operating Cost without Labor	Operating Cost per Hour	Annual Cost of Owning	Owning Cost per Hour of Operation	Total Cost per Hour (without operator)
Tractor #1	200	800	1,210	2,010	\$10.05	\$300	\$1.50	\$11.55
Tractor #2	100	300	767	1,067	\$10.67	\$700	\$7.00	\$17.67
Skid Steer	50	150	510	660	\$13.20	\$750	\$15.00	\$28.20
A	150	0	77	77	\$0.51	\$133	\$0.89	\$1.40
B	50	0	217	217	\$4.33	\$175	\$3.50	\$7.83
C	30	0	233	233	\$7.78	\$333	\$11.11	\$18.89
Irrigation	500	450	367	817	\$1.63	\$335	\$0.67	\$2.30

Calculation of Three-year Average Repair and Maintenance

	2010	2009	2008	Three Year Average
Tractor #1	560	2,500	570	\$1,210
Tractor #2	300	500	1,500	\$767
Skid Steer	850	400	280	\$510
A	180	50	0	\$77
B	450	0	200	\$217
C	400	200	100	\$233
Irrigation	300	200	600	\$367

Calculation of Annual Cost of Owning

	"Investment"	Life to Replacement (Years)	"Trade-in" Value	Owning Costs per Year
Tractor #1	4,500	10	1,500	\$300
Tractor #2	10,000	10	3,000	\$700
Skid Steer	12,000	8	6,000	\$750
A	3,500	15	1,500	\$133
B	2,500	10	750	\$175
C	1,000	3	0	\$333
Irrigation	3,500	10	150	\$335

If this approach works for you, set up Repair & Maintenance financial account to capture specific machine expenses.

Fuel can be actual count or allocated by hours.

Information will support decisions about machine ownership. Good even if you don't use it for crop costing.

Iowa Machinery Cost Calculator

Machinery Cost Calculator

Ag Decision Maker -- Iowa State University Extension

For more Information, see Information File A3-29 [Estimating Farm Machinery Costs.](#)



Place the cursor over cells with red triangles to read comments.

Enter your input values in shaded cells.

Input Data

Period over which to estimate costs (pick one)

From year of purchase to end of ownership period

Type of machine (pick one)

Power Unit

Implement or Attachment

Tractor, under 80 hp, 2wd

Rotary tiller

Original purchase price of machine

\$3,096

\$1,200

Current list price of comparable new machine

\$2,950

\$550

Age of machine when purchased

45 years

18 years

Current age of machine

50

24

Years of ownership remaining

15 years

15 years

Accumulated hours of use to date

3,500 hours

Annual use

250 hours

8 acres or tons

Field capacity in acres or tons per hour

1 ac. or t /hour

Engine horsepower

32 hp

Price of diesel fuel

\$3.50 /gal.

Wage or labor value for machine operator

\$12.00 /hour

Interest rate

4.50% %

4.50% %

Annual repair and maintenance costs

(leave blank to use calculator estimate)

Iowa Machinery Cost Calculator

Ownership and Operating Costs

Calculated from year of purchase to end of ownership period

	<u>Power Unit Alone</u>		<u>Implement or Attachment</u>		<u>Combination</u>	
Beginning value for cost period	\$3,096		\$1,200		Includes power unit costs only for the hours used with this implement or attachment.	
Estimated value at end of the ownership period	884		971			
Ownership Costs	<u>\$/year</u>	<u>\$/acre</u>	<u>\$/year</u>	<u>\$/acre</u>	<u>\$/year</u>	<u>\$/acre</u>
Capital recovery (interest and depreciation)	\$246	\$0.98	\$54	\$6.75	\$62	\$7.73
Taxes, insurance and housing	20	0.08	11	1.36	11	1.44
Total ownership cost	\$266	\$1.06	\$65	\$8.11	\$73	\$9.17
Operating Costs						
Repair cost	49	\$0.20	1	\$0.09	\$2	\$0.29
Fuel and lubrication cost	1,417	5.67			45	5.67
Labor cost	3,300	13.20			106	13.20
Total operating cost	\$4,766	\$19.06	\$1	\$0.09	\$153	\$19.15
Total Ownership plus Operating Costs	\$5,032	\$20.13	\$66	\$8.20	\$227	\$28.32

Farmers 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

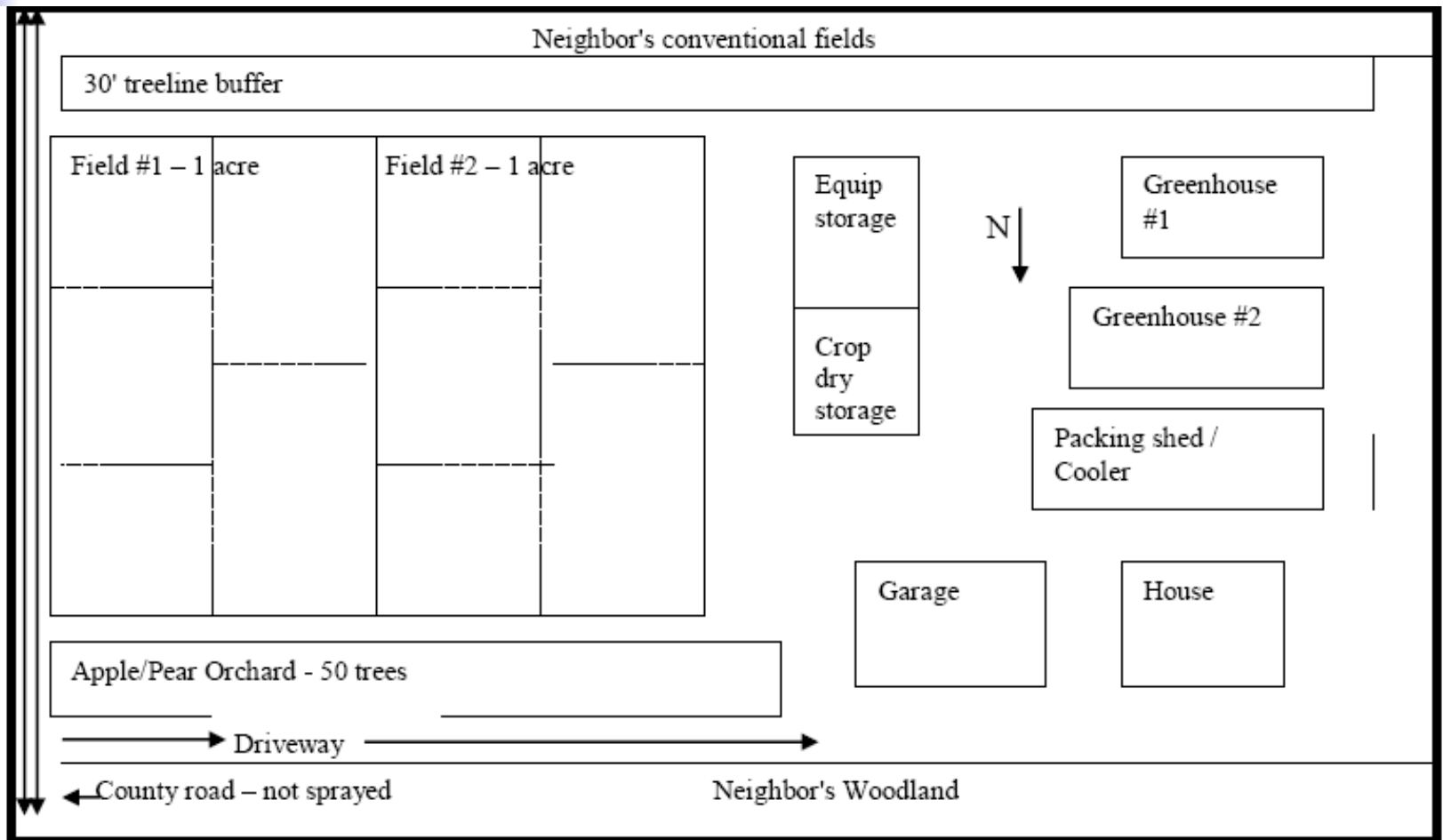
Enter in Crop Enterprise Budget under

"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.

Farm Map Example





Production Units

- Field Map
- Greenhouse sqft
- For record keeping and analysis
 - Standardize bed size
 - Ex: 300 feet long raised bed and 5.5 ft wide.
 - How many beds per acre?
 - 1,650 sqft each bed
 - Divide area of acre (43,560 sqft) by bed area
 - 26.40 beds per acre

Sample Crop Journal

TABLE 3-2: Sample Crop Journal: Carrots

1/4 acre (five 350' beds), 3 rows per bed Location: Lower field

Date	Task	Labor	Tractor/equipment	
4/23	Spread 1 load compost (4 yards or 4,800 lb)	.5	.5	(at 2 hours/acre)
	Spread 75 lb SoPoMg	.25	.25	(at 1 hour/acre)
	Spread 200 lb bagged poultry compost	.25	.25	(at 1 hour/acre)
	Disked 1x	.25	.25	(at 1 hour/acre)
4/24	Chisel 1x, bedform 1x	.5	.5	(at 1 hour/acre each)
4/24	Seed 25,000 Napoli, planter hole #10			
	Seed 100,000 Bolero, hole #8	1		
5/7	Flame weed	.5	.5	(at 2 hours/acre)
5/25	Cultivate with baskets	.25	.25	(at 1 hour/acre)
6/6	Cultivate with baskets	.25	.25	
6/10	Irrigate: set up, run, and put away	1.5	2	
6/15	Hand-weed crew	16		
6/16	Finish hand-weed	4		
6/18	Cultivate with baskets	.25	.25	
7/6	Cultivate with sweeps	.25	.25	
7/9	Irrigate	1.5	2	
7/16	Cultivate with sweeps	.25	.25	
7/18	Hand-weed crew	10		
8/1	Cultivate wheel tracks	.25	.25	(at 1 hour/acre)
8/15	Last hand-weed	2		
9/15	Bedlift 2 beds	.75	.75	(start to finish)
9/16	Harvest: 55 bushels	18		
10/2	Bedlift 3 beds	1	1	
10/2	Harvest: 85 bushels	29		
10/4	Disk 1x	.25	.25	
10/6	Seed oats with Brillion	.75	.75	
10/7	Work and pack	29		(Rate: seven 25-lb bushels/bushel)



Tracking Income

- How much of product harvested by crop
- How much of product leaves farm
- What is sales value
- ***Detail...by crop or total, sales by market?***
- Farmers market beginning inventory and end of market
- Compile all market outlets sales



Sales Receipt Example

Your Business Name
Address, Phone, Fax, E-mail, etc.

No. 6425 Dept. _____ Date _____ 20____

Name _____

Address _____ Phone _____

SOLD BY	XXXX	XXXX	CHARGE	ON ACCT.	XXXXX	PAID BY	
QUANTITY	DESCRIPTION				PRICE	AMOUNT	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
CUSTOMER SIGNATURE							
KEEP THIS SLIP FOR REFERENCE							

Carkner, Richard W. (2000). *Farm Business Records: An Introduction*.
Farming West of the Cascades,
Washington State University Cooperative
Extension.



- Resource Inventory

- Assets

- Machinery
- Buildings
- Livestock

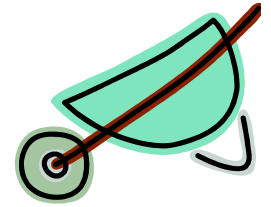
- Liabilities

- List of loans

- Do You have Inventory?



Sample Equipment List for a 1.5- Acre Market Garden*



Item	Purchase price	Current value
Hoophouse and related supplies	\$1,700	\$1,000
Used walk-behind tractor w/ rotavator	\$2,700	\$1,600
Used mower	\$250	\$100
Used Walk-in cooler (6x6x4)	\$900	\$700
Garden cart	\$350	\$150
Miscellaneous garden tools, harvest crates, and irrigation lines	\$750	\$300
Totals	\$6,650	\$3,850

*This data comes from a participating market garden.

Grower to grower: Creating a livelihood on a fresh market vegetable farm, p. 36
(2005), John Hendrickson, CIAS Outreach Specialist

Additional Assets List for a 5- Acre Market Farm



Item	Purchase price	Current value
Irrigation		
5.5 HP pump	\$550	\$300
Lay flat hose(3,00ft)	\$1,000	\$100
Sprinkler head and couplers	\$500	\$100
Greenhouse		
1,000 sqft greenhouse	\$4,500	\$1,000
Benches	\$200	\$0
Heater	\$650	\$100
16'x96' Hoop House	\$1,400	\$500
Hand tools		
Harvest and planting tools	\$2,250	\$1,200
Shop tools	\$1,500	\$500
Computer	\$400	\$50
	\$12,900	\$3,850



Fixed Assets Capital Schedule

- List of assets that can be depreciated
 - Items must be used in business or held for production of income
 - Must have a determinable life and life must be more than one year
 - Some thing that wears out, decays or gets used up
 - Can never depreciate land or inventory held for resale
 - Accountable for disposition of these items. **Example**
 - **Sample Fixed Asset Schedule**

Organic Farmers Business Handbook

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

Farmers 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.

Enter your input values in shaded cells.

Assumptions

100' x 4' bed

	Quantity	Unit	\$/Unit	Total
Receipts				
Heirloom tomato sales	400	lbs	1.75	\$700.00
Total Receipts				\$700.00

Planting Year Costs

Supplies

Seed - cover crop	0.75	lbs	0.60	\$0.45
Seed	0.25	packet	3.00	0.75
Soil mix	0.25	bag	5.00	1.25
Fertilization	10	lbs	0.15	1.50
Straw mulch	4	bales	2.50	10.00
Cages	20	cages	0.10	2.00
Other	0	lbs	0.00	0.00

Labor Costs

Cover crop	0.05	hrs	10.00	0.50
Soil mix	1.00	hrs	10.00	10.00
Fertilizer spreading	0.10	hrs	10.00	1.00
Transplanting	1.50	hrs	10.00	15.00
Irrigation set up	0.25	hrs	10.00	2.50
Mulch, set cages	2.00	hrs	10.00	20.00

Interest on Preplant Costs

64.95 dollars 0.035 2.27

Total Pre-Harvest Costs

\$67.22

Harvest

Bags (1 lb) 400 bags 0.03 \$12.00

Labor

Harvest labor	4.00	hrs	10.00	40.00
Packaging	0.30	hrs	10.00	3.00
Removing cages/vines	2.00	hrs	10.00	20.00
Other	0.00	hrs	0.00	0.00

Total Harvest Costs

\$75.00

Total Variable Costs

Per bed \$142.22

Per lb 0.36

Ownership Costs (Annual)

Irrigation System	\$1.14
Machinery	7.14
Land	2.29
Total Ownership Costs	\$10.57

Total Costs (Annual)

Per bed \$152.79

Per lb 0.38

"Ownership" Costs

- Two approaches on machinery & irrigation:
 - ✓ Assign by hour of operation.
 - ✓ Allocate in total by amount of land.
- Hourly data can be used for machinery retention/purchase decisions as a bonus.
- Allocation in total to land area is simpler.

Record of Farm Expenses

RECORD OF FARM EXPENSES					1	2	3	4	5	6
DATE	FROM WHOM PURCHASED	QUANTITY	WHAT	CK#	MACHINERY OPERATION EXPENSES					
Include details of transactions for future reference. Be sure to put down all needed information. Use two lines, if necessary. Include the name of the person or company. Put the amount of each item, tons of hay, bushels of grain, dozens of eggs, etc., and describe the item, kind of fertilizer or repairs or kind of custom work. Also include bank check number.					TOTAL COST	HIRED LABOR	Gasoline, Oil, Diesel, Grease	Repairs and Supplies	Small tools	Machine Hire, Custom Work
SUBTOTALS (carry to following pages)										

Always use check to pay expenses
 Set up columns based on schedule F or
 your own categories



Tracking Expenses

Types of expenses



Three Expenses Categories

- Variable expenses
 - Expenses directly related to selling product or service.
 - Example: fertilizer, fuel, hired labor, package, advertising, taxes, and rent paid



Three Expenses Categories

- Fixed expenses
 - Cost not directly related to your production or rendering service
 - Example: land, equipment,
 - Other expenses
 - Interest expense
- Some categories may be in both variable and fixed Examples: utilities, telephone



Deductible Expenses

- Deductible expenses are expenses that are allowed by IRS when computing taxable income at end of your business tax year
- Two categories
 - Fully deductible
 - Depreciable



Depreciable Expenses

- Business property that has an expected life of more than one year
- Example for SL method: Truck purchased for \$10,000 with *useful life* of 5 yr. **\$2,000 depreciation expense per year.**
- Section 179 allows you to treat all or part of the cost of certain qualifying properties as an expense rather than a depreciable asset.
 - \$12,000 for 2007



Expense Ledger

Monthly Operational Expenses for Farm

Farm ID						
Expenses	January	February	March	April	May	June
Car & Truck Expenses						
Chemicals						
Custom Hire (machine work)						
Depreciation						
Farmers' Market Fees						
Fertilizers and Lime						
Freight and Trucking						
Gasoline, Fuel, & Oil						
Greenhouse/ Hoop House						
Insurance						
Interests (credit cards, loans)						
Labor Hired						
Miscellaneous						
Professional Fees (tax, legal)						
Rent: Land						
Rent: Machines & Equipments						
Repairs and Maintenance						
Seeds & Plants						
Supplies/Materials/Hardware						
Taxes						
Utilities						
Others						

Some expense are more easily documented that other
 Out of pocket expenses (variable expenses)
 Labor: hired and family
 Allocating over head costs to crops



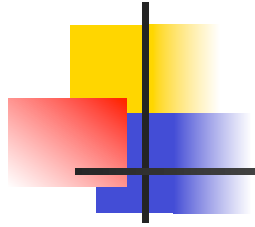
Posting

- Recording information in ledgers
 - Buy supplies
 - Sell vegetables
- Keep current on posting (weekly)
- Have a place to put all receipts and cancelled checks (folder)
- Post in pencil



Petty Cash Record

- Petty cash is all purchase made with cash or personal funds instead of business check
- Draw a check to petty cash from Revenue and expense journal recorded.
- Save all receipts for cash purchases



Tracking Labor



Owner's Labor

- Owners wage not considered on Schedule
- For crop analysis should include all labor costs
- Average rate for all workers
- 3 year average schedule F/average hours worked
- Arbitrary rate you chose



Independent Contractors

- **Independent contractors**
- Service providers who are independent contractors they are not eligible for unemployment, disability or workers compensation benefits.
- Do not need to pay employee taxes to independent contractors



Payroll Records

- May need to work with an accounting professional to set up payroll records
- FEIN: Federal employee identification number
- W-4s: all new employees must complete
- Forms I-9 Verify employment eligibility
- Official notice min. wag, hours, working conditions



Payroll Records

- Determining gross wage
- FICA or SECA (Social Security) 7.65%, OASDI is 6.2% Medicare is 1.45% .
 - Tax is imposed in equal amounts to both employee and employer
- Federal and state income tax
- Responsible to pay taxes to federal government.
- If more that \$2,500 at end of quarter, must make monthly deposits

Name: RACHEL
 Dates of this week: 10/3-10/4

46h
 Tot

One example of Individual worker time accounting.

Pro:

- Doubles as a "time card" for calculating pay.
- One form for a whole week.

Con:

- Doesn't define work type.

Service Item	Monday	Tuesday	Wed	Thursday	Friday	Saturday	Sunday
Beets							
Broccoli							
Cabbage							
Carrots							
Cauliflower							
Celeriac	2.5						
Collards							
Cucumbers							
Cukes-pickling							
Garlic							
Gourds							
Herbs							
Kale	4.5						
Leeks							
Melons							
Onions		3.0					
Cippos							
Parsnips							
Peas							
Peppers			1.5	2.5			
Potatoes-regular							
Potatoes-colored		5.0			2.0		
Potatoes-finger				3			
Potatoes-last year							
Pumpkins							
Radishes							
Raspberries							
Shallots							
Squash			2.5				
Strawberries							
Sweet Corn							
Sweet Potat.							
Fomato-Cherry							
Fomato-Slicer/Heirloom			2.5				
Fomatillos			1.5	3.0			
General Field Work							
building repair							
machinery Mainten.							
MKT/Delivery Madison					3.5		
market					2.5	4.5	
delivery Twin Cities							
book Work							
General Green house							
Errands							
General Tractor Work							
Farm Driving							
Herbs							
Zucchini							
CSA							

8 8 8 8.5 4.5 4.5

TOTAL HOURS FOR THE WEEK

HARVEST SHEET		Date: August 29, 2011					
Crop	Field	CSA	Leesburg	Stand	to Hana	Total Harvested	Notes
Arugula	Hoophouse						
Basil			10	5			
Basil Specialty	Stand/TIMO	25					
Beans	Pond/NW	1 bushel	1/2 pony	1 pony			pick NW first
Beets	EP Long Rows	20	8 bunches	4			
Carrots	Deer	30	6 bunches	4			
Celery	EP Short Rows	45	5	5			
Chard	Stand Garden	25	5 bunches	5			
Cilantro	Timo 2C		5 bunches	5	75?		
Cucumbers	NW		25#	25-50#	rest		
Dill	Timo 2C						
Eggplant	Shed Diagonal	3 ponies	some	1 pony	rest		
Garlic	In greenhouse		25				
Lettuce	Timo 2C		some	10			
Onions	In cooler		1 crate				
Okra	Shed Diagonal	1 pony?		rest			
Squash	NW / Clover			?			
Parsley	Timo 2C	25	10	5			
Peppers	Shed Diagonal		1 pony	1 pony	the rest		
Potatoes	EP Long Rows		1 pony	1 pony			
Tomatoes, cherr	Hoophouse	25 pints	30 pints	30 pints			
Tomatoes, hierl	Shed Diag/EP Lor	12 boxes	4 boxes				
Tomatoes, hybri	Hoop/Pond/EP L	3 ponies	4 ponies	6 ponies	the rest		
Winter Squash	Clover/GH	4 crates					
Mint	Herb Patch		5	5			
Oregano	Herb Patch						
Rosemary	Herb Patch						
Sorrel	Herb Patch	25					
Thyme	Herb Patch						

Pick sheet helps your team stay organized, and can then be used as data collection for later analysis

Table 3. Labor hours per acre for three farm sizes over three years

Farm scale	Average labor hours/acre	Labor performed by farm owner		Payroll expenses as a % of gross income	
		Range	Average	Range	Average
Under 3 acres	1,957	33-98%	60%	0-42%	22%
3 to 6	1,000	52-97%	64%	1-29%	13%
6 to 12	707	40-67%	53%	12-34%	20%
More than 12 acres	554	17-45%	31%	19-41%	32%



Inventory Records

- Inventory is merchandise held for sale and/or materials need for production of your products
- Inventory control helps with turnover, selling periods, and thief.
- Should contain: date purchased, items purchased, purchase price, date sold, sale price



Methods for Inventory Records

- **Specific identification method:** Used for large or one of a kind items such as cars
- **FIFO (first in first out)** assumes the items you purchase or produce first are sold first.
- **LIFO (last in first out)** assumes the item you purchased last are sold first *Check tax rules*



Valuing Inventory

- Most business use FIFO
- End of 1ST tax year can choose cost or market value
- Must be consistent with valuing inventory



Account Receivable

- Used to track money owed to your business as result of extending credit to your customers.
- At end of billing period, amounts and balance due age of balance each open account will be sent a statement showing it's invoice number, balance due, age of account (30,60,90 days) and terms of payment.



Account Payable

- Debts owed by your company to your creditors
- After the invoice is paid in full and the payment is recorded; mark the invoice paid and file with the rest of your receipts
- At end of accounting period accounts payable should be transferred to current liabilities of balance sheet



Customer Information Records

- Include name, telephone numbers, email, service performed, advise



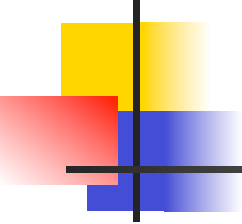
Business Checkbook

- Business size checkbook
- Duplicate features
- Preprinting and numbering checks
- Deposit records



Record Keeping

- Record keeping is considered time consuming
- Keep only records that you will need and use
- Keep records that will help you manage your farm
- Pay attention to your labor, biggest single expense-time cards
- Develop a set time to work on record keeping



The 80-20 Rule

Pareto Principle, also know as the “80-20 Rule.”

The rule states that 80 percent of your results come from 20 percent of your efforts.

80% of your personal production will come from 20% of the work you do

80% of your profits will come from 20% of your product line