

*Breaking Barriers for Beginning
Farmers and Ranchers*
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Budgeting Your Garden

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Seminar Series

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615 Culver Street, Commerce, TX 75428
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What is a Budget?

- A budget provides an estimate of potential revenue, expenses, and profit
- A budget can be done for a single enterprise (also called enterprise budget)
- What is an enterprise?
 - A type of crop or livestock
- The base unit for crops is usually one acre
- The base unit for livestock may be one head or some other convenient size

Budgets

- Budgets represent typical situations
- The primary purpose is to estimate the projected costs, returns, and profit
- Budgets help planning

Budget for Watermelon Production (One Acre)

Item	Value per acre
Revenue	
250 cwt @ \$5.50 per cwt	\$1,375.00
Variable Costs	
Seed	\$80.00
Fertilizer	95.50
Chemicals	97.75
Machinery expense	35.15
Custom Spray	8.00
Harvesting and Hauling	500.00
Labor	320.00
Interest @ 10% for 6 months	56.82
Total variable cost	\$1,193.22
Income above variable cost	\$181.78
Fixed Costs	
Machinery depreciation, interest, taxes, and insurance	\$62.00
Land charge	100.00
Total fixed costs	\$162.00
Total costs	\$1,355.22
Estimated Profit	\$19.78

Source: Kay, Edwards, and Duffy (p. 178, 2011)

Remarks

- Most enterprise budgets cover a year or less.
- Revenue is typically shown first.
- The cost section comes next.
 - Variable (or operating) costs
 - Pre-harvest
 - Before harvest
 - Fixed costs
 - Costs of the machinery needed to produce
 - Cost of the land used
 - Economic budgets include opportunity costs
 - Operator labor, capital used for variable costs, capital invested in machinery, and capital invested in land.

Economic Budgeting

- On an economic budget, some opportunity costs are included.
- Typically, these opportunity costs are for operator labor and for capital invested in equipment, machinery and land.
- The profit or return that is calculated including these costs is an economic profit.
- In the example watermelon budget, no opportunity cost was included for management.
- The profit in the watermelon budget is therefore the return to management.

Examples of Operating or Variable Expenses

- a. Seed, Fertilizer, and Pesticides
- b. Fuel and Lubricants
- c. Machinery Repairs
- d. Replacement of equipment
- e. Labor
- f. Interest
- g. Etc.

Vegetable Seed, Fertilizer, and Pesticides

- BWI Companies Inc.
 - <http://bwicompanies.com/>
- Genetic Seed & Chemical
 - <http://www.geneticseed.com/>
- Willhite Seed Inc.
 - <http://willhiteseed.com/>



Grain Farmers

- Estes Inc
 - <http://www.estesinc.com/>
- Helena Chemical Company
 - <http://www.helenachemical.com>
- El Dorado Chemical Company
 - <http://www.eldoradochemical.com/>



People...Products...Knowledge..

Examples of Fixed Expenses



- a. Machinery Depreciation
- b. Machinery Interest
- c. Machinery Taxes and Insurance
- d. Land Charge
- e. Miscellaneous Overhead

Constructing a Budget for Your Garden



- The unit of measurement in a budget is usually
 - For livestock, one head
 - For cattle, one cow
 - For swine, one litter
 - For poultry, 100 birds
- To budget your garden, you may use the measurement of the land you have available
- The time period considered in the budget may be one year or one month

Budgeting Your Garden

- a. Unit of Measurement
- b. Period of Time
- c. Single or Multiple products
- d. Assessment of Facilities
- e. Inventory of Equipment

a. Unit of Measurement



- To budget your garden, you may use the measurement of the land you have available.

b. Period of Time

- The time period considered in the budget may be one year or one month.
- Costs and revenues should be calculated for the same time period.

c. Single or Multiple Products

- A budget for a garden may include one or several of the following
 - Tomatoes
 - Lettuce
 - Cucumbers
 - Carrots
 - Herbs
 - Etc.

d. Assessment of Facilities



- Annual depreciation, interest, taxes, and insurance should be computed for each facility when relevant

e. Inventory of Equipment and Supplies



- Need to identify variable and fixed expenses

Lumber 2 in x 6 in x 10 ft



2 in x 6 in x 10 ft

Image Source: homedepot.com



2 in x 6 in x 10 ft

Image Source: homedepot.com

Community Food and Garden Network recommends ACQ (Alkaline Copper Quat) Ground Contact treated lumber that the Food and Drug Administration (FDA) approves for food contact and growing. This lasts for at least 10 yrs.

Wooden Raised Bed 4 ft x 12 ft



Image Sources: baybranchfarm.com

Garden Gloves



Tools



Long-Handled Spade

Unlike shovels, spades have straight blades set at an angle and are used for cutting and digging into soil.



Spading Fork

With their square, flat tines, these heavy-duty forks are invaluable for preparing and moving soil.



Steel Rake

Break up clay and soil clods, rake in fertilizer and smooth out soil with these tools.

Hoe

Hoes come in all shapes and sizes. They are used to form rows, make seed holes, cover seeds, till soil and cut/remove weeds.



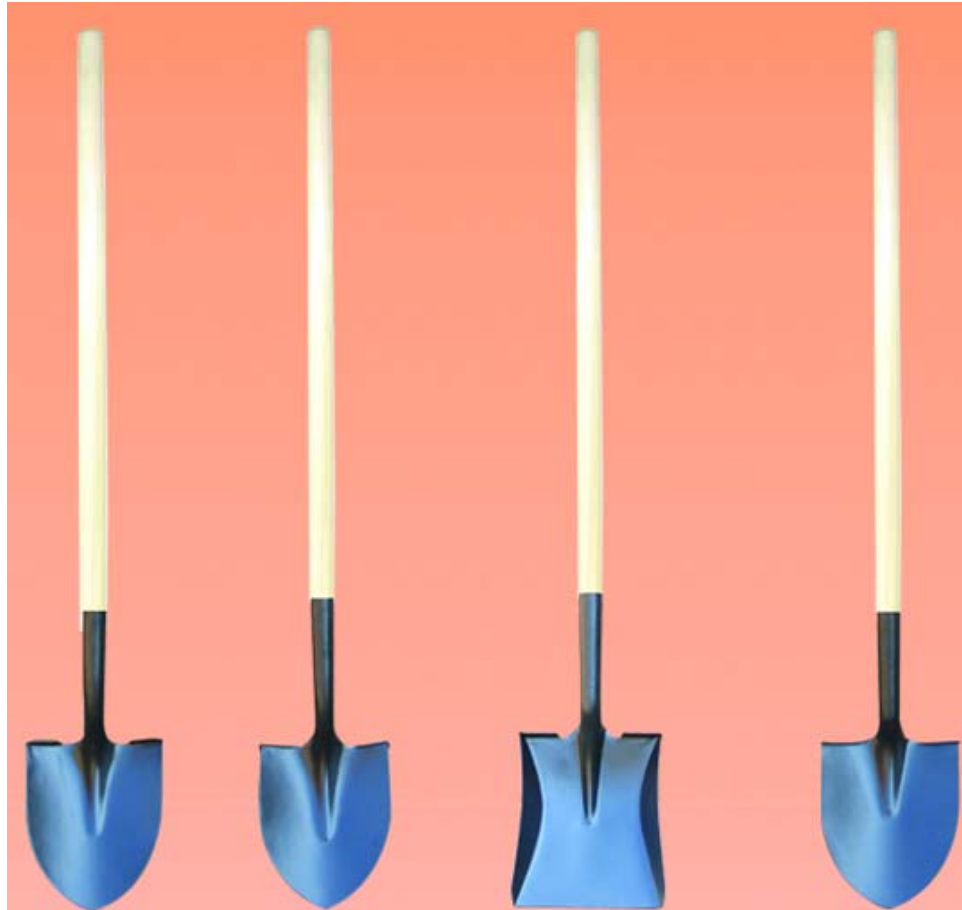
Hand Trowel

Trowels are efficient for marking rows, weeding, making furrows, potting and moving smaller plants.

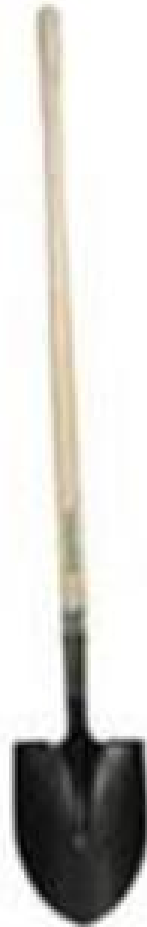
Long Handled Garden Hoe



Shovels with Long Handles



Long Handled Shovel



Garden Trowel



Image Source: lawn-and-garden.hardwarestore.com



Image Source: organicgardeninfo.com



Image Source: ok.gov

Fan Rake



Image Source: sears.com



Image Source:
promo-wholesale.com



Image Source: amazon.com

Hand Cultivator



Image Source: amazon.com



Image Source:
gardentoolcompany.com



Image Source:
gardentoolcompany.com

Veggies and Beans



Carrots



Watermelon



Green Soy Bean



Cucumbers



Radish



Lettuce



Green Beans



Tomatos

Image Sources: willhiteseed.com

Seed Starter Tray



Image Source:
dirtworks.net

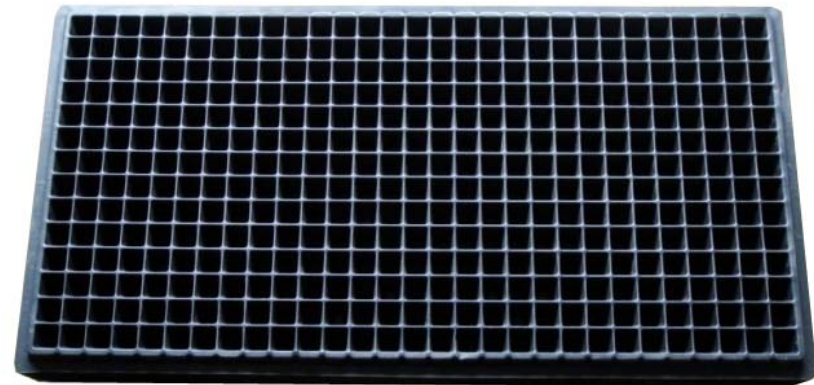


Image Source: tianhua-plastics.com

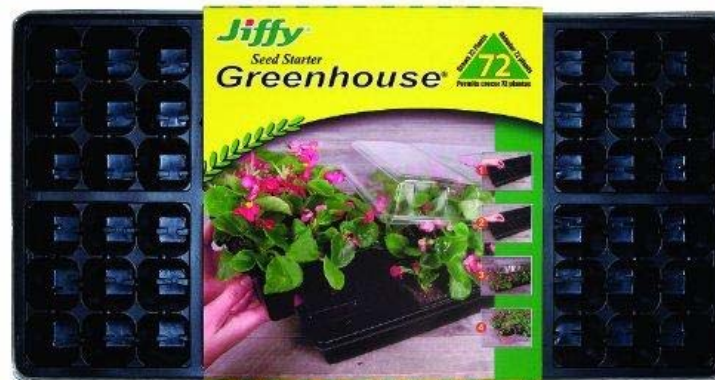


Image Source: ebay.com

Seed Starting Mix



Image Sources: amazon.com

3/4 inch 75 ft Garden Hose

Colorite Element ELCF34075 Contractor Farm Lead Free, Kink Free 3/4-Inch-by-75-Foot Garden Hose, Brick



Image Sources: amazon.com

Garbage Bags



Image Sources: amazon.com

Organic Garden Fertilizer

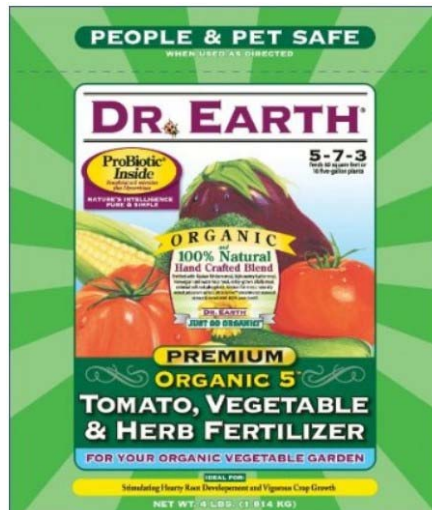


Image Sources: amazon.com

Outdoor Pushbroom



Image Source:
amazon.com



Image Source:
homedepot.com



Image Source:
amazon.com

Plastic Plant Labels

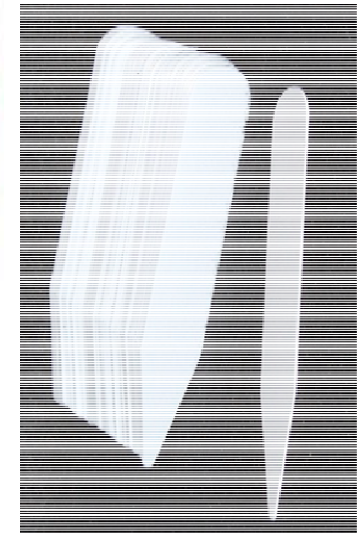


Image Sources:
amazon.com
homedepot.com

Wooden Stakes

Image Sources:

amazon.com

homedepot.com



1 in x 2 in x 24 in



2 ft long and
2 inches in diameter



1 in x 2 in x 36 in

How are wooden stakes used?



Image Sources: amazon.com

Twine



Image Sources:
amazon.com

Trash Receptacle (Trash Can)



Image Sources:

amazon.com

webstaurantstore.com

Hand Towel



Image Sources:

amazon.com

homedepot.com

lowes.com

Bypass Pruning Shears



Image Sources:
homedepot.com
amazon.com
lowes.com
homedepot.com

Non-Priority Items

10 ft x 8 ft Storage Shed



Vinyl-coated Steel

Image Source: homedepot.com



Galvanized Steel

Image Source: lowes.com

Wheelbarrow



4 cubic feet

Image Source:
amazon.com



5 cubic feet

Image Source:
homedepot.com



7 cubic feet

Image Source:
homedepot.com

Scale



11 lbs or 5kg capacity

Image Source:
amazon.com



22 lbs or 10 kg capacity

Image Source:
amazon.com



44 lbs or 20 kg capacity

Image Source:
homedepot.com

Plastic Tote Box

18 gallons



50 gallons



Image Sources: amazon.com, homedepot.com, lowes.com

Rain Barrel

Image Sources:

homedepot.com

lowes.com

livingdirect.com

50 gallons



55 gallons



60 gallons



Picnic Table

6 ft. length



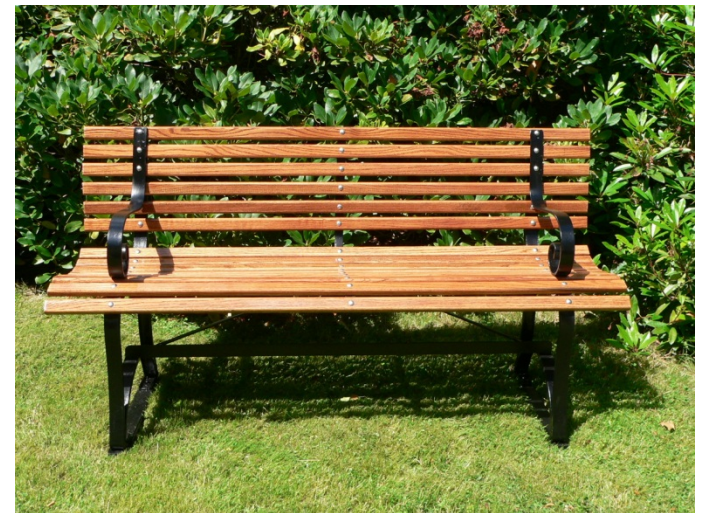
Image Source: homedepot.com

72 in. or 7.2 ft. length



Image Source: lowes.com

Wooden Garden Benches





Budget

Budget for Your Garden



Item	Cost (\$)	Unit	Qty	Total Cost
Lumber 2" x 6" x 10'	7.00	per piece	6	42.00
Gloves	7.27	each	1	7.27
Long-Handled Garden Hoe	27.54	each	1	27.54
Long-Handled Shovel	18.66	each	1	18.66
Trowel	4.49	each	1	4.49
Fan Rake	8.04	each	1	8.04
Hand Cultivator	5.00	each	1	5.00
Veggie Seeds	1.3	per packet	10	13.00
Seed Starter Tray	7.15	each	10	71.50
Seed Starting Mix	7.50	per 16 quart bag	1	7.50
Garden Hose	44.44	3/4" x 75 feet	1	44.44
Garbage Bags	26.99	70 bags of 33 gallons	1	26.99
Organic Garden Fertilizer	13.76	4 lbs	1	13.76
Pushbroom	18.99	each	1	18.99
Plastic Plant labels	9.99	pack of 100	1	9.99
Wooden Stakes	17.93	pack of 25	1	17.93
Twine	3.04	per 190 ft	1	3.04
Trash Can	9.88	32 gallon trash can	1	9.88
Hand Towel	10.65	set of 2	1	10.65
Bypass Pruner	19.98	each	1	19.98
Total				\$380.65

Where to sell your produce?



Where to sell your excess produce?

- Farmer's Markets
- Local supermarkets
- Local restaurants
- Start you own business



Fruteria Mary, Sulphur Spings, TX





Jaba Peño
2' X 4.00
Cerrano
1' X 1.00

Tornatril
1 1/2 X 1.0

Pobiano
1/2
Libra
\$1.00

Prices and Yields

- The appropriate price and yield data used in an enterprise budget will depend on its use
- A budget for next month's planning may use current price and yield
- A budget to be used for next year's planning will require the best estimate of next year's price and yield
- A budget used for long-run planning will require estimates of average prices and yields over the long run

Cost of Production

$$\text{Cost of Production} = \frac{\text{Total Cost}}{\text{Yield}}$$

- If the product can be sold for more than the cost of production, a profit will be made.
- If opportunity costs are included in the budget, the resulting profit is an economic profit.

Break-Even Analysis

- The budget can be used to do a break-even analysis
- Break-even yield and break-even prices can be computed

Break-Even Yield

$$\text{Break Even Yield} = \frac{\text{Total Cost}}{\text{Price of Prouct}}$$

The table below shows a hypothetical analysis of break-even yields for different expected prices.

Total Cost (\$)	Price (\$/lb)	Break-even yield (lbs)
100	0.75	133
100	1.00	100
100	1.25	80
100	1.50	67
100	1.75	57

Break-Even Price

$$\text{Break Even Price} = \frac{\text{Total Cost}}{\text{Expected Yield}}$$

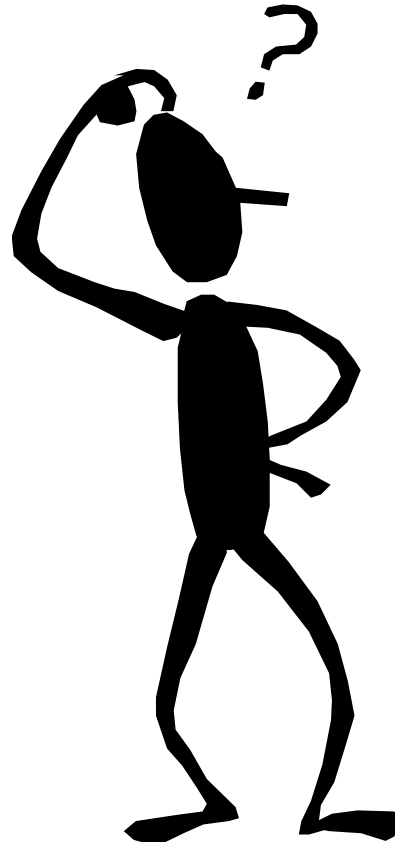
The table below shows a hypothetical analysis of break-even prices for different expected yields.

Total Cost (\$)	Yield (lbs)	Break-Even Price (\$/lb)
100	250	0.40
100	300	0.33
100	350	0.29
100	400	0.25
100	450	0.22

Summary

- Budgets help deterring future income and expenses for a single enterprise.
- Most enterprise budgets include opportunity costs in addition to explicit costs and depreciation.
- Enterprise budgets can be used to compare the profitability of different enterprises and are useful for developing a whole-farm plan.

Questions?



Next Seminar



Thursday, October 11, 2012, 6:00 – 8:00 p.m.

Food Preservation

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Thanks!