Using Partial Budgets for Decision Making

What is this really going to cost me?

To look at a specific aspect of the business…

Partial Budgeting:

Used to compare the costs and benefits of a change to a specific aspect of the operation. Looks only at those changes to income or expenses that would be directly related to the implementation of that change.

How to Create a Partial Budget:

Increased Income	$	Reduced Income	$
Reduced Cost	+ $	Increased Cost	+ $
Subtotal	A	Subtotal	B

Net Change: A – B = Additional Cost or Benefit of Proposed Change

For Cover Crops & No Till

Increased Income

- Increased Yields
- Improved Quality

Reduced Income

- Lower Yields
- Lower Quality

Reduced Cost

- Fuel
- Equipment Maintenance
- Labor

Increased Cost

- Seed
- New Equipment
- Termination

Farm Machinery Cost Estimator

This worksheet assists in calculating per acre costs of farm equipment.

Step 1: Choose the power equipment from the "Power Equipment" drop down menu and select "Open" to view the cost details (select as many pieces of equipment as necessary). Also select self propelled equipment if applicable. Adjust any values in the white cells as needed.

Power Equipment:

4WD Tractor 260 HP | Open | Close

Step 2: Select all Tillage, Planting, Crop Maintenance and Harvesting Equipment associated with the selected Power Equipment. Select "Open" to view the cost details for each piece of equipment selected. Adjust any values in the white cells as needed. To remove equipment, select it and press "Close".

Tillage Equipment:

Tandem Disk 21ft | Open | Close

Planting Equipment:

Row Crop Planter 12 Row-30 30ft | Open | Close

Crop Maintenance Equipment:

Open | Close

Harvesting Equipment:

Open | Close

Step 3: Enter the PTO HP to pull the farm Implement (yellow cells in row 20). This value should match the PTO value from the Power Equipment. If more that one piece of power equipment is selected, match the farm implement PTO with the associated PTO of the power equipment. Self propelled equipment PTO does not need to be matched to other power equipment.

Step 4: Enter the "Passes Over the Field" (green cells row 34) for each piece of equipment to calculate the total cost per acre. Enter the total number of "Passes over the Field" for each piece of power equipment (blue cells row 34).

Clear all entries

Equipment Information	Miscellaneous Information		4WD Tractor 260 HP*	Tandem Disk 30ft*	Mold-Board Plow 4-Bottom*	No-Till Drill 30ft*
List Price			$101,000	$53,000	$13,300	$95,000
Max PTO Horsepower			226	N/A	N/A	N/A
Annual Use (hours)			400	100	80	100
Field Speed (mph) (Equipment)			3.5	4.5	4.5	3.5
Width (Feet) (Equipment)			15	30	6	30
Field Efficiency (Equipment)			80%	85%	85%	70%
Salvage Value (% of list price)		15%	$15,150	$7,950	$1,995	$14,250
Useful Life (Hrs)			16,000	2000	2000	1500
Useful Life (Yrs)			40	20.0	25.0	15.0
Ownership Period (Yrs)			40.0	20.0	25.0	15.0
Remaining Farm Value Factor (RFV)	Typical RFV Factors		25.00%	13.85%	17.68%	13.85%
Average Machinery Investment			$63,125	$30,170	$7,826	$54,079
Housing Factor			0.003	0	0	0.024
Insurance Factor			0.009	0.006	0.006	0.006
Repair Factor (RF1)			0.003	0.18	0.29	0.32
Repair Factor (RF2)			2	1.7	1.8	2.1
Fuel Multiplier (1.00=Gas .73=Diesel)			N/A	0.73	0.73	0.73
PTO HP To Pull Implement (See Max PTO)			226	200	100	100
Fuel Price (gallon)			N/A	$3.00	$3.00	$3.00
Hours per Acre			0.20	0.07	0.36	0.11
Straight Line Annual Depreciation			$0.93	$1.64	$1.97	$6.12
Property Taxes			$0.00	$0.00	$0.00	$0.00
Housing			$0.09	$0.00	$0.00	$1.46
Interest Rate		3.0%	$0.93	$0.65	$1.05	$1.82
Insurance			$0.28	$0.13	$0.21	$0.36
Total Fixed Costs ($/Pass/Ac)			**$2.23**	**$2.42**	**$3.23**	**$9.77**
Repair & Maintenance			$0.95	$1.11	$2.41	$5.33
Tractor Fuel & Lub. (Lub Factor)		15.0%	N/A	$2.17	$5.43	$1.70
Labor (Factors)	1.00	$12.00	N/A	$0.86	$4.31	$1.35
Total Variable Costs ($/Pass/Ac)			**$0.95**	**$4.15**	**$12.16**	**$8.37**
Total Costs ($/Pass/Ac)			**$3.18**	**$6.57**	**$15.39**	**$18.14**
Passes Over the Field			4	2	1	1
Total Power Equipment & Implement Cost ($/Ac)			**$12.74**	**$13.14**	**$15.39**	**$18.14**

Total Cost for All Passes ($/Ac)	**$59.41**

Other Considerations:

- For multiple options, separate budgets should be prepared and analyzed
- Results are only as good as the data used in preparing
- Non-economic factors