

Crop budgets vary greatly! Prices and cost estimates are averages collected from retailers across the state. Input prices will vary by vine training, management, region, variety and other criteria and may not be reflective of YOUR true costs.

Assumptions in Analysis:

- Land is owned; purchase price not included in budgets
- Model based on 1 acre + *Vitis vinifera* vineyard
- Excellent site, no crop reduction
- Labor at \$8.00 (unskilled) or \$18.00 (skilled)
- Operating expenses borrowed at 9% interest for 6 months of expenses.
- Excellent vineyard management, including consultant
- Irrigation is included, Deer fence is not
- Fixed costs are calculated with model vineyard assumptions (see equipment below)
 - You should use your actual fixed costs
- 1 Acre 10' Between rows and 6' Within rows = 860 VINES
- Vertical Shoot Position training system
- White variety, 4 tons at full crop and valued at \$1450 at full crop

Estimated Equipment Inventory:

- 55 hp, 4wd tractor w/ spray cab = \$30,000
- 4wd pick-up truck = \$20,000
- 50-gal herbicide sprayer = \$2,700
- 300-gal airblast sprayer = \$12,500
- 5-ft rotary mower = \$1,600
- Fertilizer spreader/broadcaster = \$1,500
- Trailer (harvest, prune etc...)* = \$2,000
- Hand Tools and Safety Equipment = \$1,500

TOTAL = \$71,800

* Rent post driver, auger, drill. Does not include pole building/shed

Budgeting Recommendations:

- Labor and Capital are major requirements of a vineyard
- Write and implement a farm business plan - setting goals, managing finances and develop markets
- Manage capital assets such as land and equipment
- Create your own budgets and fixed costs including equipment, repairs, insurance, depreciation, interest and taxes
- Row spacing and vine training, which affect yield, have a major impact on vineyard profitability
- Track your expenses and at the end of the reconcile
- Talk with you family, friends and lender before entering the enterprise
- Economies of scale are important. Some vinyards are never profitable if they do not grow enough to cover costs.

Questions Contact: Shannon Dill, 410-822-1244 or sdill@umd.edu

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The 2014 Maryland enterprise budgets were developed using average yields and estimated input cost based upon producer and farm supplier data. The figures presented are averages and vary greatly from one farm to the other. It is therefore crucial to input actual farm data when completing enterprise budgets for your farm.

Fixed Cost Spreadsheet			
Depreciated Equipment Cost			
Equipment Item	Cost (Initial - trade-in)	Expected Life (years)	Per Year Charge
55HP4WDTractorw/Cab	\$ 30,000.00	15	\$ 2,000.00
4WD PickUp	\$ 20,000.00	10	\$ 2,000.00
50Gal Herbicide Sprayer	\$ 2,700.00	10	\$ 270.00
300Gal Airblast Sprayer	\$ 12,500.00	10	\$ 1,250.00
5ft Rotary Mower	\$ 1,600.00	10	\$ 160.00
Fertilizer Spreader	\$ 1,500.00	10	\$ 150.00
Trailer	\$ 2,000.00	15	\$ 133.33
Hand Tools/Safety Equipment	\$ 1,500.00	5	\$ 300.00
Total By Enterprise	\$ 71,800.00		\$ 6,263.33
<i>* Rent Post Driver, Drill and Auger for planting</i>			
Total Yearly Equipment	\$ 6,263.33		
Interest			
Interest on Fixed Cost	Total Fixed Cost	Rate	Per Year Charge
	\$ 71,800.00	7.0%	\$ 5,026.00
Total Interest Payment	\$ 5,026.00		
Repairs			
Equipment	\$ 1,500.00		
Building	\$ 1,000.00		
Total Repairs	\$ 2,500.00		
Taxes			
Taxes, Tags, License Fees	\$ 1,500.00		
Total Taxes	\$ 1,500.00		
Insurance			
Liability Insurance	300		
Property Insurance	400		
Auto Insurance	1000		
Total Insurance	\$ 1,700.00		
Total Fixed Cost	\$ 16,989.33		

LABOR ESTIMATES									
Task	Labor	Hours	Cost	Total Labor	Fuel	Hours	Fuel Cost	Lube Cost	Total Fuel
Labor - Establishment									
Field preparation	Unskilled	20	8.00	\$ 160.00	Yes	20.0	\$ 48.40	\$ 7.26	\$ 55.66
Layout, distribute and drive posts	Skilled	15	18.00	\$ 270.00	Yes	15.0	\$ 36.30	\$ 5.45	\$ 41.75
Layout, distribute and drive posts	Unskilled	20	8.00	\$ 160.00	Yes	20.0	\$ 48.40	\$ 7.26	\$ 55.66
Auger and set end post	Skilled	3	18.00	\$ 54.00	Yes	3.0	\$ 7.26	\$ 1.09	\$ 8.35
Auger and set end post	Unskilled	3	8.00	\$ 24.00	Yes	3.0	\$ 7.26	\$ 1.09	\$ 8.35
Mark line post for wires	Unskilled	2	8.00	\$ 16.00					
Drill end post for wire vises	Unskilled	4	8.00	\$ 32.00					
Install line post staples for wire	Unskilled	8	8.00	\$ 64.00					
Install end post anchor sturcutre	Skilled	10	18.00	\$ 180.00					
Install bamboo stakes	Unskilled	6	8.00	\$ 48.00					
Vine Planting	Unskilled	55	8.00	\$ 440.00					
Apply Fertilizer, Lime – At Planting	Unskilled	3	8.00	\$ 24.00	Yes	3.0	\$ 7.26	\$ 1.09	\$ 8.35
Brace Wire	Unskilled	18	8.00	\$ 144.00					
Cordon Wire	Unskilled	20	8.00	\$ 160.00					
Irrigation	Skilled	40	18.00	\$ 720.00					
Herbicide Applications	Skilled	19	18.00	\$ 342.00	Yes	19.0	\$ 45.98	\$ 6.90	\$ 52.88
Fungicides/Insecticides	Skilled	10	18.00	\$ 180.00	Yes	10.0	\$ 24.20	\$ 3.63	\$ 27.83
Vine Training/Pruning	Skilled	20	18.00	\$ 360.00					
Field Care	Unskilled	10	8.00	\$ 80.00	Yes	10.0	\$ 24.20	\$ 3.63	\$ 27.83
Drill Fescue Alleys	Unskilled	2	8.00	\$ 16.00	Yes	2.5	\$ 4.84	\$ 0.73	\$ 5.57
TOTAL		288		\$ 3,474.00		105.5	\$ 254.10	\$ 38.12	\$ 292.22
Labor - Year 1									
Field Care	Unskilled	15	8.00	\$ 120.00	Yes	15.0	\$ 36.30	\$ 5.45	\$ 41.75
Vine Training and Pruning	Skilled	40	18.00	\$ 720.00					
Irrigation Maintenance	Unskilled	15	8.00	\$ 120.00					
Fertilizer Lime	Skilled	4	18.00	\$ 72.00	Yes	4.0	\$ 9.68	\$ 1.45	\$ 11.13

LABOR ESTIMATES									
Task	Labor	Hours	Cost	Total Labor	Fuel	Hours	Fuel Cost	Lube Cost	Total Fuel
Herbicide Applications	Skilled	8	18.00	\$ 144.00	Yes	8.0	\$ 19.36	\$ 2.90	\$ 22.26
Fungicides/Insecticides	Skilled	15	18.00	\$ 270.00	Yes	17.0	\$ 36.30	\$ 5.45	\$ 41.75
Catch Wire Placement	Skilled	15	18.00	\$ 270.00					
Harvest	Unskilled	10	18.00	\$ 180.00	Yes	10.0	\$ 24.20	\$ 3.63	\$ 27.83
TOTAL		122		\$ 1,896.00		54.0	\$ 125.84	\$ 18.88	\$ 144.72
Labor - Year 2									
Field Care	Unskilled	15	8.00	\$ 120.00	Yes	15.0	\$ 36.30	\$ 5.45	\$ 41.75
Vine Training and Pruning	Skilled	55	18.00	\$ 990.00	Yes	55.0	\$ 133.10	\$ 19.97	\$ 153.07
Fertilizer Lime	Skilled	4	18.00	\$ 72.00	Yes	4.0	\$ 9.68	\$ 1.45	\$ 11.13
Herbicide Applications	Skilled	8	18.00	\$ 144.00	Yes	8.0	\$ 19.36	\$ 2.90	\$ 22.26
Fungicides/Insecticides	Skilled	15	18.00	\$ 270.00	Yes	17.0	\$ 36.30	\$ 5.45	\$ 41.75
Harvest	Unskilled	10	8.00	\$ 80.00	Yes	10.0	\$ 24.20	\$ 3.63	\$ 27.83
TOTAL		107		\$ 1,676.00		109.0	\$ 258.94	\$ 38.84	\$ 297.78
Labor - Year 3									
Field Care	Unskilled	15	8.00	\$ 120.00	Yes	15.0	\$ 36.30	\$ 5.45	\$ 41.75
Vine Training and Pruning	Skilled	55	18.00	\$ 990.00					
Fertilizer Lime	Skilled	4	18.00	\$ 72.00	Yes	4.0	\$ 9.68	\$ 1.45	\$ 11.13
Herbicide Applications	Skilled	8	18.00	\$ 144.00	Yes	8.0	\$ 19.36	\$ 2.90	\$ 22.26
Fungicides/Insecticides	Skilled	15	18.00	\$ 270.00	Yes	17.0	\$ 36.30	\$ 5.45	\$ 41.75
Harvest	Unskilled	10	8.00	\$ 80.00	Yes	10.0	\$ 24.20	\$ 3.63	\$ 27.83
TOTAL		107		\$ 1,676.00		54.0	\$ 125.84	\$ 18.88	\$ 144.72
Labor - Year 4									
Field Care	Unskilled	15	8.00	\$ 120.00	Yes	15.0	\$ 36.30	\$ 5.45	\$ 41.75
Vine Training and Pruning	Skilled	55	18.00	\$ 990.00					
Fertilizer Lime	Skilled	4	18.00	\$ 72.00	Yes	4.0	\$ 9.68	\$ 1.45	\$ 11.13

LABOR ESTIMATES									
Task	Labor	Hours	Cost	Total Labor	Fuel	Hours	Fuel Cost	Lube Cost	Total Fuel
Herbicide Applications	Skilled	8	18.00	\$ 144.00	Yes	8.0	\$ 19.36	\$ 2.90	\$ 22.26
Fungicides/Insecticides	Skilled	15	18.00	\$ 270.00	Yes	17.0	\$ 36.30	\$ 5.45	\$ 41.75
Harvest	Unskilled	10	8.00	\$ 80.00	Yes	10.0	\$ 24.20	\$ 3.63	\$ 27.83
TOTAL		107		\$ 1,676.00		54.0	\$ 125.84	\$ 18.88	\$ 144.72
Labor - Year 5									
Field Care	Unskilled	15	8.00	\$ 120.00	Yes	15.0	\$ 36.30	\$ 5.45	\$ 41.75
Vine Training and Pruning	Skilled	55	18.00	\$ 990.00					
Fertilizer Lime	Skilled	4	8.00	\$ 32.00	Yes	4.0	\$ 9.68	\$ 1.45	\$ 11.13
Herbicide Applications	Skilled	8	8.00	\$ 64.00	Yes	8.0	\$ 19.36	\$ 2.90	\$ 22.26
Fungicides/Insecticides	Skilled	15	8.00	\$ 120.00	Yes	17.0	\$ 36.30	\$ 5.45	\$ 41.75
Harvest	Unskilled	10	8.00	\$ 80.00	Yes	10.0	\$ 24.20	\$ 3.63	\$ 27.83
TOTAL		107		\$ 1,406.00		54.0	\$ 125.84	\$ 18.88	\$ 144.72

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INCOME		
Grapes	TON	\$ 1,450.00
VARIABLE COSTS		
		AVERAGE COSTS
LABOR (skilled)	HOUR	\$ 18.00
LABOR (unskilled)	HOUR	\$ 8.00
SOIL TEST	UNIT	\$ 2.33
SOIL/TISSUE TEST	UNIT	\$ 20.00
GRASS SEED - FESCUE K-31	POUND	\$ 1.20
GRAPEVINES	UNIT	\$ 3.75
HARVEST LUGS	UNIT	\$ 10.75
FERTILIZER		
FERTILIZER (10-10-10)	POUND	\$ 0.59
NITROGEN	POUND	\$ 0.42
PHOSPHOROUS	POUND	\$ 0.65
POTASH	POUND	\$ 0.36
LIME	TON	\$ 45.00
PESTICIDES		
		UNIT
GRAMOZONE EXTRA	GALLON	\$ 31.44
SURFLAN	GALLON	\$ 65.45
DEVIRINOL 59DF	POUND	\$ 9.93
NOVA	OUNCE	\$ 4.70
BENALATE	POUND	\$ 17.99
NEMACUR	GALLON	\$ 95.00
GUTHION	GALLON	\$ 48.00
LORSBAN 4E	GALLON	\$ 38.50
THIODAN	GALLON	\$ 31.96
LANNATE	GALLON	\$ 63.44
VENDEX	POUND	\$ 24.95
POUNCE	GALLON	\$ 100.00
CAPTAN	POUND	\$ 5.13
DITHANE	POUND	\$ 2.23
IMIDAN	POUND	\$ 8.55
SEVIN 4L	GALLON	\$ 39.50
SULFUR	POUND	\$ 1.20
PRISTINE	POUND	\$ 37.75
ELEVATE	POUND	\$ 34.30

WINE GRAPE - ESTABLISHED VINEYARD PER ACRE FOR 2014

ITEM	UNIT	QUANTITY	PRICE	TOTAL
GROSS INCOME				
YIELD	TON	4	\$ 1,450.00	\$5,800.00
VARIABLE COSTS				
SOIL TEST/TISSUE TEST	ACRE	1	\$ 20.00	\$20.00
NITROGEN	POUND	35	\$ 0.42	\$14.70
PHOSPHOROUS	POUND	0	\$ 0.65	\$0.00
POTASH	POUND	60	\$ 0.36	\$21.60
LIME	TON	0.5	\$ 45.00	\$22.50
GRAMOZONE EXTRA	GALLON	0.25	\$ 31.44	\$7.86
SURFLAN	GALLON	0.5	\$ 65.45	\$32.73
DEVRIKOL 59DF	POUND	3	\$ 9.93	\$29.79
CAPTAN	POUND	21	\$ 5.13	\$107.73
DITHANE	POUND	20	\$ 2.23	\$44.60
IMIDAN	POUND	1	\$ 8.55	\$8.55
SEVIN 4L	GALLON	1.5	\$ 39.50	\$59.25
NOVA	OUNCE	10	\$ 4.70	\$47.00
SULFUR	POUND	45	\$ 1.20	\$54.00
PRISTINE	POUND	1.5	\$ 37.75	\$56.63
ELEVATE	POUND	1	\$ 34.30	\$34.30
HARVEST LUGS	UNIT	165	\$ 10.75	\$1,773.75
LABOR	HOUR	107		\$1,676.00
FUEL	HOUR	54		\$144.72
INTEREST ON OPERATING CAPITAL	\$561.23	0.6	9.0%	\$30.31
TOTAL VARIABLE COSTS LISTED ABOVE				\$4,186.00
FIXED/OVERHEAD COSTS (Using fixed costs worksheet)				
DEPRECIATED EQUIPMENT COSTS	YEARLY			\$ 6,263.33
INTEREST	YEARLY			\$ 5,026.00
REPAIRS AND MAINTENANCE	YEARLY			\$ 2,500.00
TAXES	YEARLY			\$ 450.00
INSURANCE	YEARLY			\$ 1,700.00
TOTAL FIXED COST LISTED ABOVE				\$15,939.33
TOTAL VARIABLE AND FIXED COST LISTED ABOVE				\$20,125.34
NET INCOME OVER VARIABLE & FIXED COSTS LISTED ABOVE				-\$14,325.34
PRICES				
NET INCOME ABOVE VARIABLE AND	<u>YIELDS</u>	\$1,087.50	\$1,450.00	\$1,812.50
FIXED COSTS LISTED ABOVE FOR	3	(\$16,862.84)	(\$15,775.34)	(\$14,687.84)
VARIOUS YIELDS AND PRICES	4	(\$15,775.34)	(\$14,325.34)	(\$12,875.34)
	5	(\$14,687.84)	(\$12,875.34)	(\$11,062.84)

Assumptions:

1 ACRE 10' BETWEEN ROWS AND 6' WITHIN ROWS = 860 VINES

Sensitivity analysis based on 75%,100% and 125% of typical yield and current ton price.

The 2014 Maryland enterprise budgets were developed using average yields and estimated input cost based upon producer and farm supplier data. The figures presented are averages and vary greatly from one farm to the other. It is therefore crucial to input actual farm data when completing enterprise budgets for your farm.

Projected Cash Flow Budget

Name>

3 acre vineyard

	2013	Year 1	Year 2	Year 3	Year 4	
Cash inflow						
1. Beginning cash balance	\$ 5,000.00	\$ 4,591.24	\$ 5,302.91	\$ 6,014.58	\$ 6,726.25	\$ 7,437.92
2. Crop sales	\$ 17,400.00	\$ 17,400.00	\$ 17,400.00	\$ 17,400.00	\$ 17,400.00	\$ 69,600.00
3. Other farm income						\$ -
4. Capital sales						\$ -
5. Non-farm receipts						\$ -
6. Total cash inflow (total 1 to 5)	\$ 22,400.00	\$ 21,991.24	\$ 22,702.91	\$ 23,414.58	\$ 24,126.25	\$ 77,037.92
Cash outflow						
7. Chemicals	\$ 1,447.32	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 6,000.00
8. Custom hire						\$ -
9. Fertilizer and lime	\$ 163.95	\$ 175.00	\$ 175.00	\$ 175.00	\$ 175.00	\$ 700.00
10. Freight and trucking						\$ -
11. Gasoline, fuel, and oil	\$ 434.16	\$ 450.00	\$ 450.00	\$ 450.00	\$ 450.00	\$ 1,800.00
12. Insurance	\$ 1,700.00	\$ 1,700.00	\$ 1,700.00	\$ 1,700.00	\$ 1,700.00	\$ 6,800.00
13. Labor hired	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 600.00	\$ 2,400.00
14. Rent or lease						\$ -
15. Repairs and maintenance	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 10,000.00
16. Seeds and plants purchased						\$ -
17. Supplies purchased	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 6,000.00
18. Taxes	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 6,000.00
19. Utilities	\$ 1,200.00					\$ -
20. Other farm expenses	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00	\$ 2,000.00
21. Capital purchases						\$ -
22. Family living or withdrawals						\$ -
23. Term loan payments	\$ 6,263.33	\$ 6,263.33	\$ 6,263.33	\$ 6,263.33	\$ 6,263.33	\$ 25,053.32
24. Total cash outflow (total 7 to 23)	\$ 17,808.76	\$ 16,688.33	\$ 16,688.33	\$ 16,688.33	\$ 16,688.33	\$ 66,753.32
Cash flow summary						
25. Inflow minus outflow (lines 6-23)	\$ 4,591.24	\$ 5,302.91	\$ 6,014.58	\$ 6,726.25	\$ 7,437.92	\$ 10,284.60
26. New borrowing: term						
27. New borrowing: credit line	\$ 1,695.00	\$ 1,695.00	\$ 1,695.00	\$ 1,695.00	\$ 1,695.00	
28. Credit line payments	\$ 1,695.00	\$ 1,695.00	\$ 1,695.00	\$ 1,695.00	\$ 1,695.00	
29. Ending cash balance (25+26+27-28)	\$ 4,591.24	\$ 5,302.91	\$ 6,014.58	\$ 6,726.25	\$ 7,437.92	\$ 10,284.60

Comments:

*No capital purchases, additional vines or custom hire