

Feasibility of a Cooperative Winery

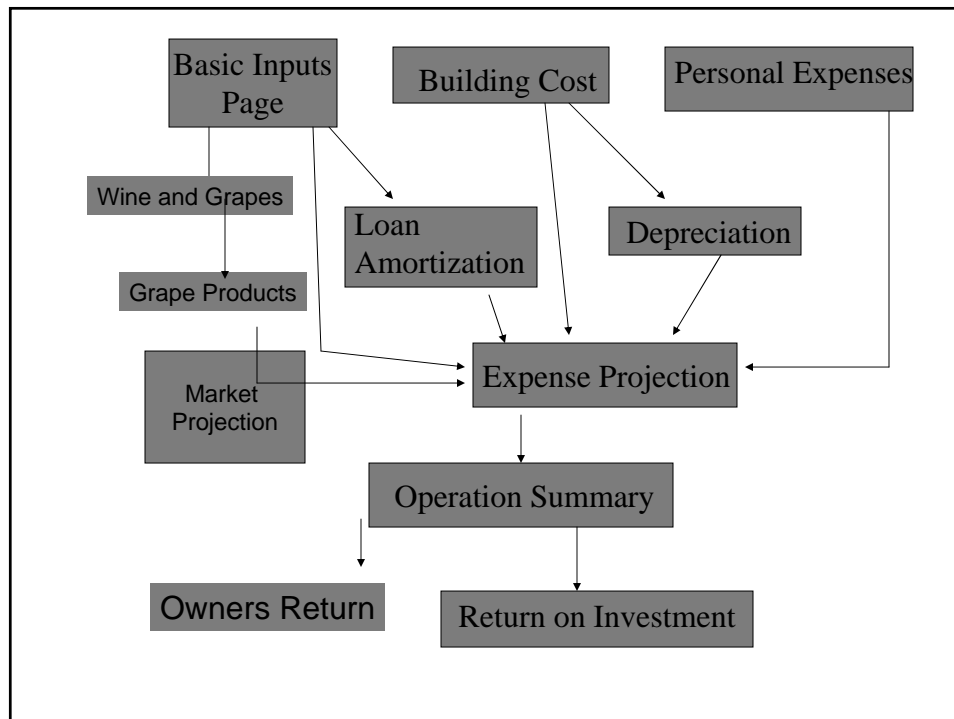
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Background

- Number of wineries has doubled in last decade
- Changes in state regulations has led to growth of small to medium sized operations
- Wineries are capital intensive operations
- Grape producers often interested in forming winery cooperative
- Groups and individual entrepreneurs need assistance in determining feasibility and planning

Winery Feasibility Template

- Designed to reflect a small to medium size Oklahoma winery organized as a cooperative
- Microsoft Excel template with ten separate worksheets including drop down menus for wine and grape selections
- Flexible format allows it to be adapted to other geographic locations, sized and business structures



Winery Template: Input Page

- Capital structure and interest rates
- Property tax, maintenance and insurance as percent of asset value
- License and fee expense
- Materials (bottles, corks, labels and capsules)

Input Page: Cooperative Inputs

- Open or closed membership
- Equity revolving period (open structure)
- Profit distribution: unallocated, cash, qualified and non-qualified patronage refund, preferred stock and common stock dividends
- Percentage of member business

Wine Products Worksheet

- Select up to 8 wines
- Specify initial volume, sales price and percentage for samples
- Select container for each wine
- Samples can be free or sold
- Flags if sales > production capacity

Wine and Grape Worksheet

- Select grapes, concentrates or blends used for each wine
- Enter price for grapes and concentrates
- Input facilitated with drop down menus

Market Projection

- Ten year projection of sales, cost of goods sold and gross profit
- Reflects inflation assumptions

Winery Template: Intermediate calculation worksheets

- Depreciation: enter plant and equip costs
- Personnel: enter employees, wages, salaries and hours
- Loan amortization- calculates interest, principal and working capital interest
- Expense projections-summarized all expenses
- Owners equity-tracks qualified, non-qualified and preferred stock

Operations Summary

- Gross sales
- Variable and fixed expenses
- Profit before patronage
- Cash and qualified stock refunds
- Taxable income
- Non qualified stock refund
- Unallocated reserves
- After tax income
- Stock redemptions
- Cash flow

Return on Investment and Sensitivity

- Return on investment-IRR, NPV, BC ratio, ROA, ROI, Payback period for cooperative
- Owners return-similar calculations for member's realized cash return
- Sensitivity analysis-impact of changes in various inputs`

Baseline Assumptions

- \$230,000 total Plant, property and Equip
- 5,300 gallon (26,000 bottle)/year capacity
- 50% debt-8%, working capital =10% sales at 6%
- Property tax=6% PPE, maintenance=2% of equipment costs
- 1% inflation rate, 9% discount rate
- Annual business fees = \$1,500, initial licenses = \$250

Baseline Assumptions Continued

- All wine sold in 750ml bottles
- Bottle-\$.60, cork-\$.18, label-\$.10, taxes-\$.17
- Production equipment-\$10,980
- Storage equipment-\$50,923
- Bottling and packing equipment-\$5,609
- Tasting room-\$3,825
- Total equipment-\$148,046
- Total PPE-\$224,987

Income and Expenses

- Gross sales-\$317,206
- Variable costs-\$150,918
- Fixed costs-\$54,445
- Cash patronage-\$25,042
- Qualified refund-\$35,059
- Non-qualified redeemed-\$24,177
- After tax savings-\$31,211
- Stock redemptions-\$24,177
- Net cash flow-\$32,128

Return on Investment

- IRR (cooperative)- 46.7%
- IRR (member)- \$16.29
- Average cash flow-\$32,128
- Closed Cooperative- IRR = 27.36% (assumes sale at 5 times EBIT in year 10)

Table 10: Impact of Changes in Variable Costs

Variable cost excluding grape cost	IRR (cooperative)	IRR (member)	Average Cash Flow
\$1.09	46.70%	16.29%	\$32,128
\$1.19	45.68%	15.84%	\$31,078
\$1.30	44.66%	15.38%	\$30,029
\$1.41	43.63%	14.90%	\$28,979
\$1.52	42.61%	14.42%	\$27,929
\$1.63	41.57%	13.93%	\$26,880
\$2.17	36.37%	11.29%	\$21,632

Each 10% change in variable cost impacts IRR by around 1%

Table 11 : Impact of Changes in Wine Price

% of Baseline	Merlot	Cabernet Sauvignon	Chardonnay	IRR (cooperative)	IRR (member)
70%	9.29	9.93	8.40	8.79%	-10.07%
80%	10.62	11.35	9.60	22.81%	2.61%
90%	11.95	12.77	10.80	35.11%	10.61%
100%	13.28	14.19	12.00	46.70%	16.29%
110%	14.60	15.61	13.20	57.96%	20.90%
120%	15.93	17.03	14.40	69.06%	24.86%
130%	17.26	18.44	15.60	80.08%	28.40%

Each 10% change in grape costs impacts IRR by over 10%

Table 12: Impact of Increase in Plant Cost

Equipment cost	IRR (cooperative)	IRR (member)	Average Cash Flow
\$74,023 (100% Baseline)	46.70%	16.29%	\$32,128
\$81,425 110% Baseline	43.26%	14.48%	\$30,248
\$88,828 120% Baseline	40.16%	12.79%	\$28,368
\$96,230 130% Baseline	37.36%	11.20%	\$26,488

Each 10% change in plant cost impacts IRR by around 2%

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Table 13: Impact of Increases in Unallocated Reserves

Percentage to Unallocated Reserve	NPV (cooperative)	IRR (member)	Average Cash Flow
0.0%	\$554,166	16.24%	\$31,804
5.0%	\$554,166	16.29%	\$32,128
10.0%	\$554,166	16.35%	\$32,453
15.0%	\$554,166	16.41%	\$32,779
20.0%	\$554,166	16.46%	\$33,107

Cash patronage held constant at 25%, qualified and non-qualified
stock reduced in proportion to increase in unallocated reserves

Increasing unallocated reserves increases member IRR and
Increases the cooperative's cashflow

Table 14: Impact of Increase in Cash Patronage

Percentage to Cash Patronage Refund	IRR (cooperative)	IRR (member)	Average Cash Flow
20.0%	46.70%	13.18%	\$34,983
25.0%	46.70%	16.29%	\$32,128
30.0%	46.70%	19.39%	\$29,257
40.0%	46.70%	25.55%	\$23,466
50.0%	46.70%	31.68%	\$17,608
60.0%	46.70%	37.81%	\$11,682
70.0%	46.70%	43.94%	\$5,688
80.0%	46.70%	50.08%	(\$378)

Allocation to qualified and non-qualified stock refund reduced in proportion to increase in cash patronage

Increasing cash patronage has a dramatic impact on member IRR and A similar negative impact on the cooperative's cash flow

Table 15: Impact of Increase in Non-Qualified Stock Refund

Percentage to Non-Qualified Stock Patronage Refund	IRR (cooperative)	IRR (member)	Average Cash Flow
70.0%	46.70%	24.19%	\$24,544
60.0%	46.70%	21.96%	\$26,711
50.0%	46.70%	19.70%	\$28,878
40.0%	46.70%	17.44%	\$31,044
35.0%	46.70%	16.29%	\$32,128
30.0%	46.70%	15.15%	\$33,211
20.0%	46.70%	12.84%	\$35,378
10.0%	46.70%	10.51%	\$37,545
0.0%	46.70%	8.16%	\$39,711

Cash patronage held constant at 25%, percentage of qualified stock patronage refunded reduced in proportion to increase in non-qualified stock refund

Increasing distributions to non-qualified stock also increases member IRR At the expense of the cooperative's cash flow

Table 16: Impact of Revolving Period for Qualified and Non-Qualified Stock

Revolving period	IRR	IRR	Average Cash Flow
1	46.70%	43.87%	(\$373)
2	46.70%	35.57%	\$6,767
3	46.70%	29.89%	\$13,292
4	46.70%	25.53%	\$19,090
5	46.70%	21.89%	\$24,437
6	46.70%	18.95%	\$28,500
7	46.70%	16.29%	\$32,128
8	46.70%	13.85%	\$35,299
9	46.70%	11.69%	\$37,794
10	46.70%	8.87%	\$40,872

Decreasing the revolving period also has dramatic impacts on Member IRR and the cooperative's cash flow

Conclusions

- Small winery shown to have attractive rate of return at baseline assumptions
- Return sensitive to grape price and moderately sensitive to plant cost
- Member's return is lower due to delayed cash flow
- Closed cooperative structure would have significantly higher member IRR if stock could be sold at 5 x EBIT in year 10

Conclusions

- Winery example illustrates the tradeoffs between cooperative cash flow and the member's realized rate of return
- Cash patronage and equity revolving periods have the most dramatic effect
- Groups attempting to design a cooperative winery could select appropriate level of cash patronage, non-qualified stock and revolving period.