

Grapes: Grape Expectations, or Will You *Ever* Get Your Money Back? (Part 1—Just the Vineyard)

When doing a financial analysis, one of the possible calculations is “payback time:” just how long does it take to recover the money you’ve invested in an enterprise? The answer, especially when farming is concerned, depends a lot on just *how much* you invest (and less on the value of the crop). To the surprise of at least one opinionated guy, we have been sailing merrily along since about 1993 with continuous increases in grape prices, to the point that many of the current grape growers have never experienced the price decline that accompanies a surplus (sort of like the dot-commers whose economic history began in the mid-1990’s, and who were astonished when the stock market actually went *down*). The historical cycles of grape growing are: you can expect about seven years of depressed grape prices, followed by seven more years of gradually increasing prices. Now, for sure these are only averages, but suppose for the moment that the seven-year time is correct. Let’s say you put your vineyard in during 1999, with the expectation that you would have your first full crop in 2002. How long will you have to farm those grapes to recover your investment?

Numbers, Numbers

Thanks to the magic of computer spreadsheets, it’s pretty simple to run a series of calculations into a bunch of multi-year projections. And yes, the assumptions you start with can make a big difference in the end result, but if you vary them over a range that seems reasonable, you can test the believability of the results. (Special note—there is no representation that these are the correct numbers, only that they are reasonable assumptions. Please feel free to disagree with any of them, as well as the conclusions). If we start with three scenarios that span the range of investment costs, and couple them with three different trends in grape prices, we can get some pretty good ideas of how important each of these things is (anyone wishing to see the complete spreadsheets, with 8 x 10 color glossy graphs with circles and arrows and writing on the back, can go to a special page on the Oakstone website at <http://www.oakstone-winery/vineyardcosts>).

It used to be that you could clear, stump, rip, fence, then install irrigation, trellises and vines for as little as \$5,000 per acre **if** you did all the work yourself (all of these calculations assume that you already own the land—if you are thinking about buying land to begin this process, you should seek professional help immediately). That’s a very optimistic figure, and today the cost is probably more like \$7,000. We’ll use that as the “low-end” case. If you do half the work, you might get by with a figure of, say, \$12,000, for the “medium” case, and if you contract out the entire effort, current rates are around \$20,000 per acre at the “high end”(some developers currently price a new vineyard, with care for the first two to three years included, at \$22,000-\$24,000 per acre, so it comes out to about the same thing).

For the sake of argument, let’s assume you put ten acres of grapes into a typical Fair Play vineyard site. We can quickly estimate, depending on the price you’ll get for your grapes,

just how well you'll do if grape prices increase, stay about the same, or decrease. If you start with a current price average of about \$1200 per ton, you can add or subtract about \$50 per year to make the calculations (actually, just as gas at the pump seems to jump instantly with crude oil price increases, then fall very slowly; grape prices have usually fallen quickly, then increased slowly), so if you look at the price of grapes at the end of ten years, they are \$800, \$1,200 and \$1,600.

The costs listed below are almost irreducible, since they are things you usually won't be willing or able to do yourself (although some people have actually pruned ten acres of grapes alone, not many do it two years in a row). Remember that these are only averages—your mileage may vary. Picking will average about \$90 per ton, pruning will run about \$600 per acre, and spray chemicals, equipment and labor will cost about \$500 per acre for an average year. Other activities are optional—you can pay someone to disc, do leaf removal and fertilize or you can do it yourself. Again, to keep the comparisons reasonable, we'll assume that the low-end case pays for the minimum, and the high-end case has *everything* done professionally. We all know that it costs money to borrow money, and we'll assume that the money is borrowed at a 7% per year interest rate (and we'll just calculate based on the amount owed after each year at a simple interest rate, to keep things simple). You have to add this cost even if the money was not borrowed because of the lost "opportunity cost:" you could have invested it in an interest-paying account or, Heaven help us all, the stock market.

Many of these costs will rise over time, but again to keep it simple, we'll use constant costs each year.

By the Years

Year one requires the training and tying of the young vines to the stakes with grow tubes, but minimal pruning and no spraying of the vines. Year two has more significant training and trellising costs and significant pruning, while year three has half a crop (two tons per acre) with spraying, picking, pruning and everything else; and you reach full costs and a full crop of four tons per acre in the fourth year.

At the end of year ten (seven and a half crops of grapes), here are the results (positive numbers mean you made that much money, negative numbers mean you still owe that much):

	Low Investment	Medium Investment	High Investment
Decreasing grape prices	130,841	-6,516	-277,260
Constant grape prices	204,778	76,246	-191,654
Increasing grape prices	278,017	153,450	-106,047

From this analysis, it's pretty clear what you need to do to make money in a vineyard—get your behind into a tractor seat as soon as possible! If you pay to have everything

done, after ten years, you will still owe between \$106,000 and \$277,000, depending on the price of grapes, and if you did everything you could, you would have *made* almost the same amount! Anything you can do to decrease the original investment will pay back many times over. If you paid to have everything done, your vineyard would return your investment in about fourteen years with increasing prices, twenty-five years with steady prices, and *never* with decreasing prices.

Your annual income after ten years would range from around \$23,000 with falling prices to almost \$55,000 if they keep going up.

Uninterested?

For many people, though, the concept of interest (unless you really *did* have to borrow the money) is kind of academic. The question they want answered, to have at least some emotional satisfaction, is “When will I get my money back?” The answer, as before, depends on how much you do and how much grapes sell for. The scorecard at the end of ten years, with no interest charges, is below:

	Low Investment	Medium Investment	High Investment
Decreasing grape prices	155,800	61,800	-104,200
Constant grape prices	228,600	134,600	-31,400
Increasing grape prices	301,400	207,400	41,400

If you paid to have everything done, your vineyard would return your investment in about nine years with increasing prices, twelve years with steady prices, and twenty years with decreasing prices (although they have historically never decreased for more than about seven or eight years in a row). As before, in the case of high investment with decreasing grape prices, no matter how long you keep farming, you just get deeper in debt! It brings to mind the story of the farmer who won \$20 million on a Lotto ticket. When the interviewer asked him what he planned to do with the money, he replied: “I guess I’ll just keep on farming till it’s all gone!”