

Decision making for profitability: Lessons learned

Liz Martin, Muddy Fingers Farm

This past growing season, we endeavored to learn the relative profitability of each of our crops. It seems that farmers who can identify their most profitable crops (and especially their least profitable ones) are the farmers who succeed and thrive - and we want to join that number! We had always been put off, though, by what seemed like the huge amount of record keeping that would be required to gain accurate information on the profitability of each crop as we grow more than forty different crops. In this year of record keeping, we learned that in reality, the amount, quality, and precision of the information that we gained far outweighed the small amount of work that was required to collect it. The key we discovered was getting organized in the previous winter, thinking out our systems and even going so far as printing and putting in binders all of our record keeping pages well before the season started.

What we wanted to learn was how many **dollars we were earning per minute spent on each crop** as well as how many **dollars per bed we earned on each crop**. Our farm is small and relatively space limited and thus how much we earn per bed is important as we don't have space to grow crops that are low dollars per bed crops. But our time is the most limiting factor.

To determine either figure we had to ascertain how much we harvested of each crop. **Harvest records** were kept by tracking what we harvested for each market and how much we charged for the item. This log was kept in a binder in the washing area, right next to the place where we pack bins full of produce. This was very convenient. There were columns labelled "Crop", "Amount Harvested", "Price", "Harvest Time" and "Post-Harvest Time" that we filled in for each item we harvested. The actual harvest time was written in one column by the person who did the picking. The washing and packing was put in the "Post-Harvest Time" column by whoever did that portion of the work. Dividing the harvest labor into these two categories was convenient for us as it is not always the same person who does the two tasks and writing them separately saved having to find the person who did the other job and talking to them.

During the slow hours of the following winter we crunched the numbers to see how much we earned for each crop and total time spent harvesting each crop (this number is used in the labor section below). We also kept a log in the same binder of every time we **Composted/Preserved/Donated** any item and how much. This amount we subtracted from the harvest records at the end of the season.

To learn how much we made per bed we simply divided how much we earned from the crop by how many beds we had of the crop. Our beds are 100' long.

In addition to harvest labor we tracked **general field labor** (soil prep, transplanting, seeding, weeding, cultivating, thinning, etc.). This was kept in a separate binder as it

was easier to keep the records where the action was happening. The method of collection was as follows.

Our **field labor** was kept in a three ring binder with just lined paper inside. This was our **crop journal**. Each crop was given its own page at the beginning of the season. Every time we did any work on a crop we entered it in the crop journal. Just a simple note is enough: “tilled one bed” or “transplanted 3 beds” and how many minutes the task took, expressed in one person equivalent. If two people weeded for 30minutes, we entered this work as “Weeded - 60 minutes.” We kept this binder handy (often on the dining room table or near the crash-on-at-the-end-of-the-day-couch) and wrote in it at lunch time and again at the end of each day. Every few days we flipped through the binder saying “have you done anything to *“insert vegetable name here”* lately?” flipping each page and asking the question in order to catch anything that slipped through the cracks.

At the end of the season we flipped through our crop journal and added how many minutes of field work we did on each crop (tilled 1 bed 10 minutes, transplanted 3 beds 90 minutes, weeded and thinned 2 beds 75 minutes and so on). We also took this time to spot errors taking note to see that all the steps for each bed was accounted for. If it said we had transplanted four beds of chard, we made sure an amount of time was indicated for the tilling of four beds for chard, too. We estimated a figure for any glaring omissions.

Next we took the number of minutes from the harvest records (mentioned above) and added minutes harvesting for each crop and then minutes washing and packing. Finally we added the harvest and field labor numbers together to get one grand labor number per crop.

To learn how much we made for each crop per minute of labor we simply divided total income from each crop by total labor for that crop (harvest labor + field labor).

We have always had a general sense that each of our 100' beds needs to make us a minimum of \$400 per season and a general idea of which crops hit this mark. By doing the record keeping we learned that they ranged from \$109 up to \$1065, with the average being slightly below the goal at \$376. But we had no idea about how many dollars per minute we needed or wanted to make. We learned that our time spent on crop production ranges from a low of \$.51/ minute up to \$2.31/ minute with the average being \$1.11/ minute.

The results were sometimes surprising! Things that we had predicted would be losers based on how many dollars per bed we knew they had made in the past were winners by the new figure of dollars per minute. Pumpkins for example was our second highest

crop per minute and our very lowest per bed crop!

There are several things that seem important to remember. First, the figures that we came up with are not the actual profit on the crop, rather just a comparison relative to each other on our farm. Certain general labor was not factored into the labor numbers in any way- things such as maintenance of fences and machines, irrigation components, mowing, and - most time consuming - marketing the products. Also key to consider is that these figures will vary much by farm based on what grows well, what is well managed and what sells well within each individual operation. Our numbers may have no relevance at all to other farms as there are soil, management and sales quirks that are specific to us as farmers and to our land.

Secondly, lots of factors feed into what is grown on a farm and this information just gives us two more specific points to consider when planning plantings for next year. Our business is about ½ CSA sales and therefore some crops will probably be grown despite the fact that they may be low on profit. Keeping these records though provided an easy way to see how we can decrease labor and increase profit on those crops or even that we need to charge more if we are already producing them as efficiently as we feel we can. Or it may help us to decide to limit how many beds we grow of certain crops. It is also important to remember that just because we can make lots of dollars per minute on a crop, doesn't mean that we can necessarily sell more of that crop if we were to grow more of it.

We have decided to use last year's data as a baseline. But we also used it to focus on the crops that came in nearest the bottom on the dollars/minute scale. We did not decide to drop any of these crops, at least not this year. Instead we used this information to know which crops we especially need to improve on. We are focusing on improving profit on our bottom five crops in each category. For example carrots, which were a poor performer for us based on how many minutes of hand weeding they took last season, we decided would come out higher on the scale once we are able to cultivate them mechanically. We decided we'd try some pole beans instead of bush beans to hopefully reduce the labor of harvesting which really added to the minutes, thus lowering the dollars we earned. And raspberries we will prune more ruthlessly in the hopes of getting larger berries and therefore more money for the same amount of harvesting labor. In his book The Organic Farmer's Business Handbook (our inspiration for doing all of this) Richard Wiswall suggests that farmers should find the courage to simply stop growing the poorest performers. We are not ready to give up on any of our crops, quite yet. But next year if some of the same crops still come out near the bottom perhaps we will be!