

Virginia Cooperative Extension



Farm Business Management Update June – July 2007

To: Extension Unit Directors, Extension District Directors, Extension Program Directors, and Farm Management Agents, and ANR Specialists

Dear Co-Workers:

Farm Business Management Update is a joint effort of the Agricultural and Applied Economics faculty and the area farm management agents. Subject matter areas include timely information on farm management, marketing, tax management, finance, credit, labor, agricultural law, agri-business, estate planning, 4-H and economic education, natural resources, and CRD. Please use this information in your on-going Extension programs and circulate to all Extension staff. **Farm Business Management Update** is electronically accessible via the Virginia Cooperative Extension World Wide Web site (<http://www.ext.vt.edu/>). To see the articles listed in the reverse chronological order, select “News,” then select “Farm Business Management Update” listed under the heading “Periodicals.”

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Change is Inevitable, Success is Optional

By Matthew Miller (mamille6@vt.edu), Extension Agent, Agriculture and Natural Resources, Farm Business Management, Southwest District

A little over a month ago, Southwest Dairy Extension Agent Chase Scott and myself organized a “Dairy Innovation Tour” for southwest Virginia Dairymen. The final destination and one of the main highlights was a visit to Mason Dixon Dairy located just south of Gettysburg, PA. I suspect many of you have had the opportunity to visit the Mason Dixon Farm. Our visit was guided by Mr. Richard Waybright. The Waybright family has been on their family farm site since the late 1700’s. The Waybright family and Mason Dixon Dairy offer hundreds of lessons in family farm transition and innovation in their production practices. Our tour of the 2,300 head Mason Dixon Dairy featured a plethora of innovative and thought inspiring aspects. Mason Dixon features a methane digester that powers the entire farm and provides excess electricity to be sold to the local power grid. Alternative power has certainly been in the news lately; the Waybrights have been utilizing this technology since 1979! The majority of the Waybright’s 7,000 tillable acres has the capability of utilizing center pivot irrigation, the hay equipment can mow up to 30 acres an hour, and 500 of the Mason Dixon cows milk themselves via DeLaval robotic milkers. It would be easy to become awe-struck at the Mason Dixon operation. However, as much as I enjoyed the innovation, it was a quote from Mr. Waybright that struck the strongest chord. In our group discussion, Mr. Waybright stated “Change is Inevitable, Success is Optional.” In a time when there is so much hesitation, concern, and worry about today’s agriculture environment, the Waybrights are steaming ahead with enthusiasm, creativity, teamwork, and profitability. On the six-hour ride home to Southwest Virginia, I thought about Mr. Waybright’s comments.

“Change is Inevitable”

All one has to do is drive through what has been rural countryside and look at new development throughout Virginia to know that change is inevitable and moving at a rapid pace. Change isn’t necessarily pleasant for many of us, and often a feeling of helplessness surrounds change. However, the do nothing or it won’t work attitude is a prescription for failure. I wish I knew how many times I have heard someone speak about the old days, the way things used to be, how we were all better off when... Regardless of how good or bad the old days were, it is safe to assume that they are not coming back. I recently was party to a conversation on making hay and listened carefully as a 64-year-old gentlemen argued about current hay making methods. He stated he had been making hay for 60 years. I know some pretty talented 4-year-olds, but none are making hay. This gentleman has become stuck in a comfort zone and is fighting the tide of change. His refusal to learn new methods and improve his production capability simply hurt his bottom line. I enjoy nostalgia and history as much as the next person. However, in the case of the Waybright’s and other profitable farming operations, history is a lesson learned and used as a valuable tool to grow and improve. History is both a method for determining past success and failure and replicating the good and avoiding the bad.

“Success is Optional”

I visit with many farmers, and I find that those successful operators are always knowledgeable, aware of the changes around them, and look for ways to take advantage of their changing environment. We continue to see a rapid escalation in the price of land. While some producers throw their hands in the air, those cognizant of the change are securing more land via lease, creating more collaborative partnerships, and exploiting markets associated with more development and residential pressure. Successful operators are always aware of market fluctuations and more importantly the factors creating these changes. This awareness allows for forward thinking, risk management, and in some cases diversification to weather the temporary storm. These operators typically maintain excellent records and utilize their data to make the most accurate and pertinent decisions they can. I find that the majority of successful operators are their own toughest critics and focus on their internal issues worrying little about the next door neighbor. They have a constant desire to both grow their business’s production and quality output. Successful operators are also looking for new and innovative methods to make them more efficient. Many of these people spent time traveling to conferences, visiting other producers, and gaining knowledge from multiple avenues. In the case of Mason Dixon Farm, if they can’t find the necessary equipment they need to be more efficient, they simply build it themselves. Many successful producers choose to become voices for their industry, choosing to make time to serve as a voice in an agricultural industry that is in need of more spokesmen. These same operators know that change will sometimes create difficulty and financial loss. In most cases, they have planned for this low tide and were smart enough to store up for the rainy day. Most successful operators have chosen to increase production, taking advantage of economies of scale. Greater production capacity offers greater marketing choices and marketing power. Others who may be restricted on expansion capability are constantly seeking ways to add value to their product and differentiate their product in a massive marketplace. Successful operators are always looking to move to a higher level in both the quality of production and the prices received for their product. Often agriculture producers are price takers; successful operators are striving to be price setters or are at least moving into a different pricing structure. Finally, successful operators, while tied to their farms emotionally, are able to remove themselves enough to make profitability decisions for the whole business. Farming is a lifestyle, but for that lifestyle to be sustainable, it must also be profitable.

I would encourage anyone who has the opportunity to visit Mason Dixon Farm and the Waybright family to do so. The positive direction and message from the Waybright’s is uplifting. Whenever you find that you are searching for answers for your farming operation remember Richard Waybright’s message, “Change is Inevitable, Success is Optional.”

Financial Analysis of an Agricultural Business - the Job-Cost Estimate

By Alex White (axwhite@vt.edu), Instructor, Agricultural Finance and Small Business, Agricultural and Applied Economics, Virginia Tech

My last article discussed the basics of enterprise budgets – what are they, why you need them, and how you use them. This issue will focus on a similar statement – the job-cost estimate. Job-

cost estimates are very popular in the landscaping and contracting industries, but they can be very useful tools for any agricultural business.

A job-cost estimate lists the expenses related to a specific activity or “job.” For example, a landscaping firm might use a job-cost estimate to determine how much it will cost to design and install a residential landscape project. A greenhouse operator might use a job-cost estimate to determine all of the expenses involved in holding a special event such as a customer appreciation day or an educational seminar series. A pumpkin producer might use a job-cost estimate to estimate the costs involved with a pumpkin festival.

Besides helping a producer determine and estimate all of the expenses related to a certain “job,” a job-cost estimate also helps you determine the price you will need to charge for doing that job. Further, a job-cost estimate provides information that will help you determine your breakeven level of sales.

Format of a Job-Cost Estimate

Everyone who uses a job-cost estimate has a slightly different format, but a job-cost estimate has five basic sectors – Machinery Expenses, Labor Expenses, Materials Expenses, Overhead Expenses, and the Price Estimate section. A sample job-cost estimate is available at the end of this article. Again, there are several formats for a job-cost estimate – most managers start with the basic format and then tailor it to fit their specific operations.

The Machinery Expense section lists all of the machinery or equipment that will be used in completing the job. For example, a landscaper may need a skidloader, trencher, truck, and trailer to install a landscape design. The Machinery Expense section for this job would list the following information:

- type of machinery or equipment needed
- total hours each machine is needed on the job
- total cost per hour for each machine
- total cost for each machine

This list will help you think through all of the different types of machinery and equipment needed to complete a job. It helps you schedule the order of operations, as well as the availability of equipment. For example, you may determine that you will need to rent a certain piece of equipment to complete the job.

There are two main formats for the Labor Expense section. One method is to list the types of labor needed to complete the job (the “activities”). For this method, you would list all of the activities the labor force would be doing – mowing, raking, installation, customer service, etc. The second method is to list the workers who will be involved in the job – 1 manager, 4 workers, etc. Regardless of which method you choose, you list the following information in this section:

- each activity or each worker
- the hours needed for each activity or worker to complete the job

- the total hourly cost for each activity or each worker
- the total labor cost of completing the job

For example, a greenhouse operator determines that he/she will need four workers to successfully hold a Customer Appreciation Day event. Each worker will be used for eight hours, and the hourly cost of each worker is \$20/hour. The hourly cost includes cash wages as well as FICA and FUTA costs, worker's compensation, and any perks paid to the worker. A rough rule of thumb is that your actual total labor costs (wages, FICA, FUTA, etc.) are generally 150% of the cash wage. For example, if you are paying a worker a wage of \$10/hour, that worker is costing you approximately \$15/hour after all other non-wage labor expenses are included.

A little tip I learned about estimating the labor involved in a job – add a 20% efficiency factor to most of your estimates. This 20% efficiency factor will account for time the employee is actively on the job, as well as the time they are setting up, cleaning up, or on breaks. For example, a lawn care manager may estimate that a worker will need 5 hours to mow a yard. But you need to realize that the worker is “on the clock” while he is loading the mower onto the trailer, driving to/from the worksite, eating lunch, and refueling or repairing the equipment. For that reason, you should list 6 hours (5 hours mowing x (1 + 20%)) labor on the job-cost estimate.

The Materials Expense section is probably the easiest section to complete. This section is simply a list of the materials needed to complete the job and the associated cost. For this section you list:

- the specific materials needed
- the amount of each material needed
- the actual cost (before markup) of each material
- the total material cost

You may include sales tax in your material cost, or you may list it separately – but be sure to include the sales tax in your job-cost estimate.

Total Direct Job Costs are determined by totaling the machinery, labor, and materials costs. One way to regard Total Direct Costs is that these are the “out of pocket” expenses or the variable costs of completing the job.

Overhead expenses are those expenses that cannot be directly attributed to one particular job. Examples of overhead include rent, administrative salaries, business licenses, insurance premiums, and office utilities. It can be hard to estimate how to allocate a portion of a business' overhead expenses to a particular job; therefore, most operators use a percentage of overhead expenses for each job. For example, if you think you will have 10 relatively similar jobs per year, you include 10% of the annual overhead expenses in each job-cost estimate.

Other items that can be included in the Overhead Expense section are guarantee costs and contingency costs. A guarantee cost estimates how much it might cost a business to repair or replace a defective product. For example, a landscaper may guarantee all plants for up to one

year. If a plant dies before the one year is up, the landscaper must replace that plant. Most firms typically use a percentage of the total plant expenses as a guarantee cost.

Contingency costs are basically “what if” costs. What if we underestimated the amount of materials or labor needed? What if the cost of the materials is higher than expected? What if you forgot to include a material or piece of machinery in the job cost? Again, contingency costs are usually estimated at a percentage (for example, 2%) of the total direct costs of the job.

Once all of the above expenses are estimated, simply total them to determine the Total Job Cost. This is your best estimate of the direct (variable) and indirect (overhead or fixed) costs related to a specific job. This figure represents the total cost of completing a job, and it also represents the *minimum* price that you should charge, or bid, for a job. There are several methods of determining the actual charge or bid for a job. The most common method is the “Cost Markup” method. For this method, you determine the appropriate cost markup percentage to use. This markup percentage varies by industry and location – there is not a set percentage to use. You must determine the appropriate percentage to use for your business and your customers.

The cost markup method is quite simple, once you have determined the cost markup percentage. Simply multiply your Total Job-cost estimate by (1 + Cost Markup Percentage) to determine your final price or bid for the job. For example, assume that your Total Job-cost estimate is \$5,000, and your cost markup percentage is 25%. Your estimated charge for the job is calculated as follows:

$$\$5,000 \times (1 + 25\%) = \$6,250$$

This charge of \$6,250 is intended to cover all of your variable costs (Total Direct Costs), a portion of your annual fixed costs (Overhead), a portion of any guarantee or contingency costs, and provide some profit to the business. Again, you will have to determine your cost markup percentage on your own.

Job-cost estimates are powerful tools for a wide variety of businesses. I have seen examples of job-cost estimates in the landscaping, lawn care, construction, and consulting industries. But I think that job-cost estimates can be powerful tools for agri-tourism, wholesale or retail greenhouses, and for special events (livestock sales, open houses, seminars, etc.) at any agricultural business.

If you would like to receive an Excel spreadsheet with a basic job-cost estimate, please contact Alex White at axwhite@vt.edu, or call Jill at (540) 231-7727 and leave your contact information. You can also go to my new (and still under construction) website at <http://faculty.agecon.vt.edu/alexwhite/> to download a job-cost estimate spreadsheet.

Job-Cost Estimate - Binford Tool, Inc.

	Machinery	Cost/unit	Units	Total
	36" self-propelled mower	\$2.40 /hr	130 hours	\$312.00
	20" push mower	\$0.50 /hr	60 hours	\$30.00
	Weedeater	\$1.50 /hr	80 hours	\$120.00
	Cyclone spreader	\$0.40 /hr	20 hours	\$8.00
	3/4 ton pickup truck	\$8.75 /hr	20 hours	\$175.00
	Flatbed trailer	\$2.80 /hr	20 hours	\$56.00
A	Total Machinery Costs			\$701.00
	Labor (includes 20% efficiency factor)			
	Bob - mowing, spreading	\$6.50 /hr	250 hours	\$1,625.00
	Joanie - mowing, installation/upkeep	\$8.00 /hr	150 hours	\$1,200.00
	Sammy - mowing, supervising	\$9.00 /hr	100 hours	\$900.00
B	Total Labor Costs			\$3,725.00
	Materials			
	Railroad ties	\$4.00 /tie	50 ties	\$200.00
	Hardware, supplies			\$250.00
	Fertilizer			\$60.00
	Mulch	\$1.50 /cu. ft	30 cu. ft	\$45.00
	Plant Materials			\$500.00
C	Total Materials Costs			\$1,055.00
D	Total Direct Costs			\$5,481.00
	Overhead	25% of Total Direct Costs		\$1,370.25
	Contingencies	2% of Total Direct Costs		\$109.62
E	Total Overhead & Contingencies			\$1,479.87
F	Total Job Cost Estimate			\$6,960.87
	Minimum Bid - Cost Mark-up Method	25%		\$8,701.09

A Farmer's Responsibilities to His Business

By Peter Callan (peter.callan@vt.edu), Extension Agent, Farm Business Management, Northern District

Who is the most valuable person on your farm? Herdsman? Milker? Tractor driver? Many owners forget that they are the most important person on their farm. Why do many dairy farmers immediately call their veterinarian when an animal is sick? Yet many farmers postpone visiting the family doctor when they are sick because “they are too busy and it will get better in a couple of days.” How many times does delaying visiting the family doctor result in the owner visiting the local hospital emergency room and spending several days in the hospital? How many farmers have an annual check up with their family doctor? How many illnesses (e.g. diabetes, hyper tension, and skin cancer) can be detected at the annual checkup? Many of these health problems can be treated and monitored by their family physician before they grow into major problems. If the owner can not manage his business when he is ill, who will manage it for him? The farmers' health and well being is the most important asset on his/her farm.

Many farmers believe “they can do a better job than the hired help.” Many farmers take the attitude that if they work “longer and harder,” they can increase the farm's profits. In times of tight cash flow, many farmers try to reduce labor costs as a means of reducing expenses. What are the costs of working longer hours? How many farmers routinely attend their children's school events, consistently spend time with the family, and annually schedule a family vacation? Who comes first: the cows, the crops, or the family? Farmers need to get away from the business to recharge and rejuvenate. Finally, farmers need adequate rest to work safely. How many farm accidents could have been prevented because the owner was “over tired” and did not pay close attention to the task at hand?

Farm owners need time to manage their businesses. This management time is especially difficult because many farmers have maximized labor efficiency on their farms years ago. Producers and employees are working at maximum capacity. Where does the farmer find the time to manage the business when the owner and employees have little free time left after completing the daily tasks? A farmer wears two hats in their business: owner/manager and laborer. Time spent managing the business may be the most profitable time a producer spends on his/her farm. For example, a dairy farmer needs to ask himself/herself an important question: What management decisions improved the farm's bottom line when I spend the time analyzing my records and make decisions based on facts rather than my “gut feelings”?

Producers need time to analyze financial data, production data, herd health, and cropping records. What are the farm's profit centers? What is the primary enterprise and are there alternative enterprises that drain profits and resources – dairy steers, beef cattle, or crops? What are the three and five year profitability trends for the farm's enterprises? What are the strengths, weaknesses, and areas of improvement on the farm? Can the land, labor, and capital devoted to an enterprise generate higher returns elsewhere in the business?

Farming is a dynamic business. If farmers do not take time to monitor trends on their farms, who will manage their business? The old adage “on the plains of hesitation bleach the bones of countless millions” reflects to the management style of many producers. When producers elect not to make decisions regarding the management of the farms, they are making a decision to maintain the status quo on their farms. If producers do not spend time managing their businesses and develop strategies to maximize profits on their farms in a rapidly changing business environment, their businesses may not survive in the long run. Best wishes for a safe and profitable 2007!

The Management Calendar

By Gordon Groover (xgrover@vt.edu), Extension Economist, Farm Management, Department of Agricultural and Applied Economics, Virginia Tech

Well, another dry spring for most of the state, not yet a full blown drought. Hopefully, the rain we received from tropical depression Barry will increase soil moisture levels to get crops a good start. The National Oceanic & Atmospheric Administration (NOAA) does not predict drought conditions in VA through August

(http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.gif), yet drought conditions exist just over the line in NC. From my view of the New River Valley, we are behind our normal planting and hay harvest schedules.

- What does it cost to live down on the farm? Data from 1,196 farm families enrolled in the Illinois Farm Business Farm Management Association (FBFM) reported the grand total for living expenses averaged \$59,686 for 2006. The details of the Farm and Family Living Income and Expenses for 2006 by Dale Lattz, at the Department of Agricultural and Consumer Economics, University of Illinois can be found at http://www.farmdoc.uiuc.edu/manage/newsletters/fefo07_10/fefo07_10.html
- Ag Decision Maker (AgDM) at Iowa State has an updated series on strategic planning. Topics range from strategic planning to portfolio analysis and enterprise strategy development. These are short papers that can get you to think about and manage your farm as a business. Find them at <http://www.extension.iastate.edu/agdm/wdothet.html#Strategic>.
- The dry spring and spotty rains so far this year may make for a short feed supply for late summer and winter feeding. Plan on developing a feed budget based on animal demand and best and worsted case scenarios for pasture and feed production. The current grain situation makes relying on purchasing additional energy or protein in the spot market more risky. Ed Rayburn, Extension Forage Agronomist at West Virginia University, has a good discussion of what's required to estimated animal demand and forage production <http://www.wvu.edu/~agexten/forglvst/forbudgt.htm>. Robert L. Woods and Daren Redfearn, Extension Forage and Pasture Management Specialists at Oklahoma State University, have an example worksheet that can be adapted to Virginia conditions at <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2809/PSS-2584web.pdf>. Make sure you check with your local extension agents to get go estimates for local yields.
- Update estimates of harvest time and yields and develop new plans for possible delays or shortfalls of forages for late harvest.

- Update your marketing plan by collecting information on prices and world market situations. Keep abreast of weekly market trends by reading the Roberts' Weekly Agricultural Commodity Market Report at <http://www.ext.vt.edu/news/periodicals/roberts/> and Tennessee Market Highlights <http://economics.ag.utk.edu/tnmkt.html>.
- As part of your marketing plan, stay up to date on government programs. A fact sheet on Nonrecourse Marketing Assistance Loan and Loan Deficiency Payment Program can be found at http://www.fsa.usda.gov/FSA/printapp?fileName=pf_20070601_farln_en_nonrecmkt.html&newsType=prfactsheet. Up-to-date information on your county's Loan Deficiency Program (LDP) and Posted County Price (PCP) is at the following Farm Service Agency web site <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=prsu&topic=landing>.
- Be sure to check with your local Farm Service Agency for changes in government programs and sign-up deadlines. Review USDA and other crop and price forecasts. You can find the dates for [USDA Agency Reports Calendar](#) release with links to the appropriate agency web sites.
- With half the business year soon be behind you, a six-month financial record check-up is in order. Updating your records through the month of June allows you to quickly gauge financial progress by comparing the farm's actual expenses and income to your budgeted amounts. If you did not develop a budget, compare your mid-year expenses and income to half the items reported on your 2005 Schedule F. Flag any items that are different from budgeted amounts. These differences are not necessarily problems, just items that need to be examined and explained.
- Watch your line-of-credit and compare it to previous years, paying careful attention to large changes from your past experiences.
- Production records for livestock and crops should be updated for the first half of the year. Look for big changes from last year, and make sure to cross-reference these with production expenses.
- Even with the time constraints of summer activities, try to plan and hold regular staff meetings with family members and employees to discuss work plans and set priorities for the next day/week. Consider brainstorming about alternative ways to deal with problems. Use some of the time to help discuss positive outcomes of previous plans and recognize individuals for being creative and doing a good job.
- When you hire new employees make sure you read Sarah L. Fogleman's (Kansas State) article on "Effective Training" at: http://www.agmanager.info/hr/management/Effective_Training.pdf
- Checking your credit rating in July should become an annual event. Independence Day should remind you that you should be independent from identify theft and credit mistakes. All individuals and business owners should annually check their credit ratings. Additional information on your rights to access your credit report and links to the site for obtaining a free copy of your credit report can be found at the Federal Trade Commission's (FTC) web site at <http://www.ftc.gov/freereports>. The FTC cautions consumers to make sure they use the correct site because there are "Imposter" sites.

Calendar of Events

June

18-21 State 4-H Congress. Blacksburg. Contact: State 4-H Office at (540) 231-6371.

25-28 State FFA Convention. Blacksburg. Contact: Andy Seibel at gseibel@vt.edu, (540) 231-3823.