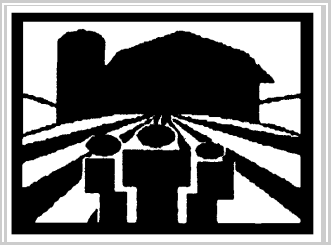
Virginia Cooperative Extension



Farm Business Management Update
April – May 2003

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 (at 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."

Gordon E. Groover
Extension Economist, Farm Management
and Farm Management Coordinator

Karen Mundy
Rural Economic Analysis Program
Communications Specialist

Item Page

Virginia Urbanization: "Lemons to Lemonade" 1
Economic Impacts of the 2002 Farm Bill on Peanut Farms in Six States 3
What Type of Deworming Program Puts the Most Money in the Producer's Pocket? 6
Land-Lease Survey Report for Southwest Virginia 8
2003 Land Rental Guide for the Shenandoah Valley 11
The Management Calendar 15
Watershed Management Planning Workshops 19
New Publications 21
Calendar of Events 21

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, religion, sex, age, veteran status, national origin, disability, or political affiliation. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Steven H. Umberger, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; Lorenza W. Lyons, Administrator, 1890 Extension Program, Virginia State, Petersburg.

VIRGINIA STATE UNIVERSITY

Virginia Urbanization: "Lemons to Lemonade"

By Megan Green and Dr. David M. Kohl

Urbanization. It is the talk of Virginia agriculture today. To many, it is a horrendous evil, vowing to destroy the family farm and all that it entails. It is a threat that could result in a loss of jobs and lifestyles that have lasted for generations, throughout wars, floods, and many family disputes. However, several agribusinesses in Virginia have decided to overcome these perils. They have decided to change. They have decided to diversify.

On February 14 and 15, Dr. Dave Kohl's Agricultural Management and Problem Solving class visited different agricultural businesses in the western Virginia area. Every business visited in those two days took advantage of one thing – urbanization. From growing a trendy crop, to appealing to those who desired a "farmette," to adding glass and glee to your old fashioned milk products, these farmers knew how *and* who to farm. They were entrepreneurs that took a general commodity and did not simply add value to it – they earned that value and retained it.

The first business visited was a dairy and trout farm in Buchanan. The owners took advantage of profits made from the dairy and turned a natural amenity, an abundant spring, into a home for some 35,000 trout. The family was able to keep fixed costs for the hatchery and lanes for the trout low and pulled profits from the dairy when needed. Both entities contribute to the business and help make the cash flow work. They keep labor costs low and capitalize on the natural resources of water and woods around them. They use their own timber to construct buildings and sheds needed for the farm. The business is so economically sound that the total farm profit has averaged in the six figures in recent years. Not bad for fish and milk.

The next operation that was marketing urbanization was Rockbridge winery in Raphine. What's better than a lovely weekend in the sun, live music, good food, and a nice inexpensive bottle of wine? The *people* who pay generously for such a commodity are better. The winery pulls in the urbanite looking for the culture of the city they miss, yet, searching for the rustic taste of agriculture and the farm. Again, the owner makes use of his land wisely. Not only does he use the correct slope of his land to cultivate his grapes, he turns his storage shed into a homey shop and an eclectic venue to hold wine tastings and dinner parties. The owner made a long-term investment in his land. He decided to diversify. Now he brings in profits and awards annually. How do they measure their success? In 1995 and in 2000, the winery was awarded with the top state award for two different types of wine. If that does not prove success, how about listening to a man so proud of what he does that he could spend hours talking to you?

Another agribusiness that was changing the agricultural paradigm was none other than a John Deere dealer in Rocky Mount. How did Anderson Tractor deal with urbanization? How could he market to the new owners of the mini-farms? He got mini, too. He built a whole separate store devoted to what he called the consumer and commercial market. He changed his hours in this smaller operation to fit the customer's lifestyle. He opened the store on weekends. Not only did he improve his business by appealing to the urbanite, he constantly improves his core business. He employs an incredibly competent sales staff, absorbs approximately 86 percent of his bills through parts and service alone, and knows the margins his business can withstand. He even knows his customers so well that he can categorize them three ways and better serve them

because of this characterization. The three tiers include the small tractor owner, or the mini-farmer; the farmer who is also dependent on off-farm income, or the 70-90 horsepower tractor owner; and the *farmer* whose life and paycheck depend on the farm. He has products and services available to completely satisfy all three. He does not complain about urbanization and change, he capitalizes on it.

What is better after a long day on your tractor after mowing your recently purchased 10 acres than a huge bowl of ice cream? What about a tall glass of milk and a couple of cookies? The Homestead Creamery in Burnt Chimney can satisfy that hunger and much more. They can catch your eye and send you back to times when you were a kid and waited for the glass containers of milk to be set outside your door. This creamery not only markets their incredibly creamy and delicious dairy products, they also market a look and feel. Not only does this business possess a spot on Kroger's shelves, they also possess a humble country store in the front of the creamery where the products are created. They also sell other homemade pie fillers, salsas and dips, along with scrumptious scoops of ice cream. What makes them different? Why should you buy their product? The *idea* of it all is the key. The marketing technique that takes you back in time, to simple, happy days. So what if the American dream of 40 acres and a mule has changed to 10 acres and a Corvette? You still have your milk in a shiny glass container.

The final business that we visited that is taking advantage of urban sprawl is a horse cutting/dairy farm/hunting reserve in Union Hall. The three completely different enterprises are all intertwined. How does the Shelton family manage it all? They don't. They lease out their land and liabilities to others. They are simply owners. The family leases out the horse farm to a very competitive and successful man in the cutting horse business. They stable more horses on their farm worth more than five figures than you can count on your hand. They enjoy the success of the leasee who has clients that vary from a New York stock exchange extraordinaire to an NFL football player. Yet, they have no liabilities and will not risk losing a business or career if the leasee falls off one of those horses and breaks a leg. They take this same concept and apply it to the dairy business. The only thing they manage is the hunting reserve. No longer do they have to wake up to milk at 5:00 in the morning in the heavy snow. Someone else does it. What responsibilities do they have? They cater to the successful businessman or famous athlete and guide them on a backwoods turkey hunt.

All the Virginia agribusiness managers mentioned are shifting paradigms and profiting during times of change. They capture the appeal of the new consumer – the urbanite. But these business managers are not successful simply because of this change. They do other things extremely well. These business managers use the resources they have very wisely. They are continuously educating themselves and developing new ideas to improve. They know their market. They know their limits yet are constantly searching for ways to set new ones. They know the business cycle and do not fear it. They expand when times are good and save when times are bad. They trust their employees. They are not perfect. They have made bad decisions and faced adversity but persevered. They are excellent communicators. All of these Virginia agribusinesses we visited possessed these qualities. However, the one thing that really sets them apart from all the others is that they know their focus, do it well, and **love** their jobs.

Economic Impacts of the 2002 Farm Bill on Peanut Farms in Six States

By Jim Pease

The Virginia Peanut Growers' Association funded a study conducted by Jim Pease (VT), Mike Roberts (VCE), Fred Shokes (Tidewater AREC), and Gary Bullen (NCSU) to analyze the financial performance of peanut farm models representing high-quality management in the leading peanut production county of Virginia, North Carolina, Georgia, Alabama, Florida, and Texas. The specific objectives were to analyze financial performance of peanut farms with and without the changes made by the 2002 Farm Bill in peanut policy and to help Virginia peanut farmers as they make difficult adjustment decisions.

Representative farm models were developed through on-site interviews with producers and other experts in the studied counties. All production and overhead costs were estimated, as well as all government payments, family living expenses, off-farm income, and taxes. Profitability, liquidity, and other financial indicators were estimated using the University of Minnesota budgeting programs collectively called FINPACK. Financial performance was estimated with and without the provisions of the 2002 Farm Bill (Farm Security and Rural Investment Act - FSRI) for both the farm business as well as the farm family. Farm cropland acres of these representative farms range from 800 acres (Alabama) to 2,128 acres (Texas). Peanut acres range from 170 acres (North Carolina) to 554 acres (Texas). Peanut yields per acre under dryland production are 3,000 pounds (Virginia), 2,900 pounds (North Carolina), 2,200 pounds (Georgia), 2,700 pounds (Alabama), and 2,900 pounds (Florida). Irrigated yields per acre are 3,800 pounds (Georgia), 4,000 pounds (Florida), and 3,800 pounds (Texas). Every farm except Alabama produces more acres of cotton than peanuts, and other minor crops were produced on farms in Virginia, North Carolina, Alabama, Florida, and Texas. In addition, the Alabama and Florida farms have beef cow enterprises. Under the 1995 Farm Bill (FAIR), most peanut farms owned between 20 and 30 percent of the quota peanuts produced, but the Texas farm did not rent quota. Farms produced additionals in amounts between 7 percent (Virginia) and 80 percent (Texas) of total production. All farms are well integrated into the commodity programs for other crops, the payments from which form a very important part of farm business income. All farms are solvent, with debt/asset ratios ranging from 26 percent (North Carolina and Texas) to 36 percent (Alabama). Assets held range from approximately $850 thousand (Alabama) to nearly $1.7 million (Texas). Liabilities range from approximately $271 thousand (North Carolina) to over $488 thousand (Georgia). Each farm family earns some income from off-farm employment, ranging from $10 thousand (Texas) to $30 thousand (Alabama and Florida). Family living expenses ranges from $35 thousand (Alabama) to $50 thousand (Texas). Table 1 presents selected results of the FINPACK simulation under the FAIR provisions.

Table 1. FAIR[1]: Peanut Farm Financial Status and Performance						
	Virginia	**North Carolina**	**Georgia**	**Alabama**	**Florida**	**Texas**
Gross Farm Income	$526,147	$601,582	$663,363	$559,047	$579,572	$867,474
Peanut Income	$175,560	$132,617	$262,970	$289,440	$266,220	$364,726
Cotton Income	$202,500	$360,000	$325,230	$136,500	$232,500	$342,867
Other Crop Income	$109,748	$53,510	$29,273	$88,566	$36,625	$69,867
Commodity Program Payments	$38,339	$55,455	$45,890	$44,541	$44,227	$90,014
Total Cash Expenses	$470,812	$534,964	$569,326	$522,576	$502,677	$708,708
Net Cash Farm Income	$55,535	$66,618	$94,037	$36,470	$76,895	$158,766
Net Farm Income	$16,510	$31,686	$39,489	-$7,060	$34,712	$95,610
Family Net Cash[2]	-$45,179	-$16,823	-$8,178	-$32,520	-$19,094	-$2,591
Commodity Payments as % of Net Cash Farm Income	69%	83%	49%	122%	58%	57%

Table 2 presents a different scenario representing financial performance under provisions of the FSRI and assuming that peanut market price is equal to the loan rate ($355/ton).

Table 2. FSRI[3]: Peanut Farm Financial Status and Performance						
	Virginia	**North Carolina**	**Georgia**	**Alabama**	**Florida**	**Texas**
Gross Farm Income	$526,625	$609,133	$657,445	$509,641	$564,294	$929,720
Peanut Income	$116,820	$87,261	$171,124	$191,160	$180,540	$279,465
Cotton Income	$202,500	$360,000	$325,230	$136,500	$232,500	$342,867
Other Crop Income	$109,748	$53,510	$29,273	$88,566	$36,625	$69,867
Commodity Program Payments	$97,557	$108,362	$131,818	$93,415	$114,629	$237,521
Total Cash Expenses	$438,274	$514,186	$515,847	$452,940	$451,196	$691,354
Net Cash Farm Income	$88,350	$94,947	$141,598	$56,701	$113,098	$238,366
Net Farm Income	$49,525	$60,015	$87,050	$13,171	$70,915	$175,210

[1] Does not include any potential assessments against the 2002 quota price because of prior year's overproduction.
[2] Family net cash equals net cash farm income plus off-farm income minus debt payments minus living expenses minus taxes.
[3] Does not include quota buyout payments.

Family Net Cash	-$25,405	-$632	$19,313	-$17,509	$443	$45,699
Commodity Payments as % of Net Cash Farm Income	110%	114%	93%	165%	101%	100%

All representative peanut farms are unambiguously better off financially under FSRI provisions, even while facing the lowest effective peanut price. The Texas farm is clearly the strongest and most prosperous, and its production cost efficiencies make it a formidable competitor for any U.S. producer. To a lesser degree, the same can be said for the Georgia farm. Even without considering the peanut quota buyout, the Georgia farm has improved net cash farm income and net farm income, and its net cash position may permit expansion if desired. The Florida farm and (less so) the North Carolina farm are maintaining a relatively secure financial position with FSRI, but the unanswered question is whether these farms can obtain sufficient capital for reinvestment or expansion. The Virginia farm nets only marginally less net cash income than the North Carolina farm. But higher debt, higher depreciation expenses, and lower commodity program payments cause the Virginia farm to be in a poorer financial situation than any except the Alabama farm. The Alabama farm is still in serious financial difficulty with FSRI. Relative cost of production, inefficiencies, high debt, and low yields put this farm at financial risk. These results imply continuing financial difficulties for many peanut farms in Virginia, North Carolina, Alabama, and Florida.

With the FSRI provisions (Table 10), the Virginia farm grosses $526,625, up approximately $500 from the FAIR result. Peanut income has declined by nearly $59,000, and peanuts bring in only 58 percent of cotton income. Commodity program payments have risen by over $59,000, slightly exceeding the peanut market income that was lost with FSRI, and thus leaving the income picture virtually unchanged. Commodity program payments have risen from 7 percent to 19 percent of gross farm income, and payments are equal to 110 percent of net cash farm income. In other words, the farm business has lost money in the market under these conditions, and government payment income is subsidizing market income. Cash expenses have declined by approximately $32,500, and the farm's net cash income increases by nearly $33,000 to $88,350. Cash expenses as a percent of cash income fall to 83 percent from 90 percent with FSRI conditions, and operating expenses now equal only 74 percent of gross income. The farm family does improve its net cash position after principal and interest, living expenses, and taxes, but the net position is still very negative (-$25,405). Even subsidization of the farm business with an annual $13,500 in peanut quota buyout over the next five years will not solve the financial problems of the Virginia farm. However, the farm business is in a better annual family net cash situation than with FAIR. After accounting for depreciation expenses, the Virginia farm has net farm income of $49,525, earns a positive rate of return (1 percent) on owner equity. With these sources of income and these expenses, the Virginia farm is better off than with FAIR, but still is not financially stable.

The Virginia farm has 100 fewer crop acres than the North Carolina farm, but earns net cash farm income of only $6,597 less with FSRI. However, its depreciation expenses are 11 percent more than those of North Carolina, and its principal and interest payments are 19 percent higher. This farm may have taken on too much debt for machinery purchases. Current yields and costs

of production do not generate sufficient farm profits, and the farm family is unable to meet its cash debt, living expense, and tax obligations, even with the addition of peanut quota buyout payments. This conclusion holds even if yields are improved by 10 percent at no additional cost, and quota buyout payments are also included. Higher prices have very little effect on net farm income and family net cash position of the Virginia farm because of the counter-cyclical payment program. However, net farm income is improved if cotton replaces all peanut acreage, and family net cash losses are reduced significantly if peanut quota buyout is included in family income. If irrigated peanut production is not available to this farm, then ways must be sought to reduce the machinery complement and associated debt, improve yields at no extra cost, or expand farm size to plant more cotton and garner higher commodity payments.

Results of this study imply that the following are keys for profitable peanut farm businesses with new Farm Bill provisions:

1) Irrigated peanut yields of greater than 3,800 pounds per acre, or dryland yields greater than 3,200-3,300 pounds per acre;
2) Control of program acreage and all associated commodity payments;
3) Reduced input costs (especially chemical costs), possibly through longer peanut rotations; and
4) Careful selection and judicious financing of the least cost machinery complement necessary to complete peanut production and harvesting operations.

What Type of Deworming Program Puts the Most Money in the Producer's Pocket?

By Daniel Osborne and Todd Petrunger

Introduction and Background

Livestock producers need to understand that internal and external parasites can have a major effect on the performance of livestock. Cattle with a moderate to heavy parasite load will eat less and are more susceptible to increased levels of stress and disease. These problems result in less weight gain and, therefore, lower profits.

Various deworming strategies are used to control parasites, but one consideration that producers must make is whether to use a non-persistent activity dewormer or a more costly persistent activity dewormer product. A non-persistent activity dewormer gets rid of parasites that are infecting livestock at the time they are treated. A persistent activity dewormer continues to get rid of parasites for typically 3 to 4 weeks after treatment. In an effort to determine whether paying the extra cost for persistent activity dewormer is worth it, we compared the economic benefits of persistent activity dewormer to non-persistent activity dewormer.

Method and Measurements

This study began on June 14, 2002 and was conducted at the Bland Correctional Center's Beef Farm located in Bland County, Virginia. It involved 42 beef calves comprised of 22 steers and

20 heifers whose average weight was 315 pounds at the beginning of the study. To begin, we weighed all the calves and dividend them into three groups of 14 calves each. Within each of the three groups, we randomly treated the calves based on the order they came through the chute. One-third of the calves were given a persistent activity dewormer, one-third were given a non-persistent activity dewormer, and the last one-third, which served as a control, were not treated. The three groups were then each turned out to separate large pastures in which they remained for the duration of the study. The intent of replicating the study three times by way of the three groups was to eliminate the impact caused by the quality of pasture.

Farm management provided us with the birth date and weight for each calf; therefore, we were able to calculate the average daily gain (ADG) of the cattle from birth to June 14, 2002. After 77 days on August 30, 2002, the calves were again weighed, and the ADG for the 77-day period was calculated. Then, the difference in ADG for the 77-day period and pre-June 14 period was calculated. The total weight gain that resulted from the difference in ADG was determined and then given a value based on a standard price of $75/cwt. The cost per dose of dewormer was subtracted from the additional weight gain value to determine the net profit from the deworming program. Finally, the average net profit was calculated for the three different deworming programs.

Limitations

This study has several limitations. First, because the three different deworming programs were used within each group of calves, even larger than reported differences could be expected. In other words, the calves that were untreated and treated with non-persistent activity dewormer benefited from the calves treated with persistent activity dewormer because of fewer larvae in the pasture. At the same time, the treated calves suffered from the untreated calves because of more larvae in the pasture.

Second, the treatment of calves was not evenly distributed between steers and heifers. Because of the random selection method used, a larger proportion of steers received a persistent activity dewormer. This could have impacted the differences in ADG, but I do not feel that the overall conclusion was effected. Other limitations, such as the weather conditions, were certainly prevalent. However, they were considered to be beyond our control or insignificant to the outcome of the study.

Results

When compared to the ADG before deworming, the control group, which was not treated, had an average increase of 0.04 pounds in ADG. Over 77 days, the increase in ADG translated into 3.08 additional pounds per calf. At $75/cwt., this means the additional revenues of $2.31 per calf would have been pocketed because there was no cost for dewormer (Table 1).

Table 1: Bland Correctional Facility Deworming Study Results

Dewormer Type	ADG from Birth to June 14	ADG from June 14 to Aug 30	Difference in ADG	Total Gain as a Result of Difference	Value of Additional Gain	Cost per Treatment	Increase in Net Profit per Calf
Persistent	2.36	2.60	0.24	18.48	13.86	2.17	11.69
Non-Persistent	2.42	2.53	0.11	8.47	6.35	0.76	5.59
None	2.30	2.34	0.04	3.08	2.31	-	2.31

The group of calves that received non-persistent activity dewormer had an increase in ADG of 0.11 pounds. Over 77 days, this translated into an average of 8.47 additional pounds per calf. As a result, additional revenues would have been earned in the amount of $6.35 per calf. However, the average cost per dose of non-persistent activity dewormer was $0.76, so the net profit from the increase in ADG was $5.59 per calf.

Those calves that received the persistent activity dewormer had an increase of 0.24 pounds in ADG. Therefore, during the test period, the calves gained an average of 18.48 additional pounds. When the average cost of $2.17 per dose for the persistent activity dewormer was subtracted from the additional revenues, the net increase in profits would have been $11.69 per calf.

Conclusion and Discussion

Based on the results of this study, it appears that paying the higher price for persistent activity dewormer is the best economic alternative if only one dose is given during a 2 ½ month period. When you compare the persistent activity dewormer to the control group, $9.38 more in additional revenue was earned. Comparing the non-persistent activity dewormer group to the control group, only $3.28 more in additional revenue was earned.

Other considerations that could impact the accuracy of our conclusion include environmental conditions, the sex of the calf, and the number of treatments in a given period. Similar future studies will allow us to evaluate these considerations and their impact.

Land-Lease Survey Report for Southwest Virginia

By Tom Covey and Daniel Osborne

The Southwest Virginia Farm Business Management Extension Agents, Tom Covey and Daniel Osborne, conducted a land-lease survey during December 2002 and January 2003. Over 5,400 surveys were mailed to farmers and landowners in Southwest Virginia. We received 259 (4.8%) from the counties of Alleghany, Bedford, Bland, Botetourt, Carroll, Craig, Dickenson, Floyd, Giles, Grayson, Lee, Montgomery, Patrick, Pulaski, Roanoke, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe.

The results of the survey are summarized in the following tables. Since the fair value of land rent varies significantly from situation to situation, the information presented is intended for reference purposes only. For more information on farmland leasing, contact your area Farm Business Management Extension Agent.

Land Leasing Survey Results For Southwest Virginia						
	Pasture*			Whole Farm*		
	# of Acres	Cost/Acre ($)	Total Cost ($)	# of Acres	Cost/Acre ($)	Total Cost ($)
Responses	127			84		
Average	108		1,944.79	212		3,364.88
Weighted Average		18.06			15.88	
High	700	64.00	17,500.00	1,700	55.00	27,500.00
Low	5	2.00	80.00	10	0.25	50.00
Totals	13,570		245,044.00	17,802		282,650.00
	Cropland*			High Value, Specialty & Low Acre Crops		
	# of Acres	Cost/Acre ($)	Total Cost ($)	# of Acres	Cost/Acre ($)	Total Cost ($)
Responses	54			8		
Average	72		1,853.80	19		2,373.00
Weighted Average		25.85			126.98	
High	400	75.00	13,500.00	100	200.00	11,000.00
Low	4	1.39	40.00	1	100.00	150.00
Totals	3,872		100,105.00	150		18,984.00
* Farm land rented at zero cost was not included in these calculations						

Other information relating to the survey is as follows:

1. About 55% of the responses were from landlords.
2. Just over 20% of the leases reported were to family members.
3. Only 27% of the leases reported were written leases.
4. The terms for about 55% of the written leases were for one year.
5. In over 70% of the leases reported, the tenant was in charge of weed control, brush hogging, minor fence repair, and fertilizer and lime application.

Land Leasing Survey Results for the Bland, Smyth, Wythe & Washington County Region

	Pasture*	Cropland*	Whole Farm*
Responses	25	14	22
Weighted Average Cost	20	37	16
High ($)	40	71	71
Low ($)	2	20	1

Land Leasing Survey Results for the Carroll, Grayson, & Patrick County Region

	Pasture*	Cropland*	Whole Farm*
Responses	26	10	6
Weighted Average Cost	22	18	9
High ($)	40	50	18
Low ($)	11	7	6

Land Leasing Survey Results for the Coalfield Counties Region
(Includes Dickenson, Lee, Russell, Scott, Tazewell, & Wise Counties)

	Pasture*	Cropland*	Whole Farm*
Responses	26	6	20
Weighted Average Cost	16	53	16
High ($)	64	70	55
Low ($)	3	15	0.25

Land Leasing Survey Results for the New River Valley Region
(Includes Floyd, Giles, Montgomery, & Pulaski Counties)

	Pasture*	Cropland*	Whole Farm*
Responses	40	18	31
Weighted Average Cost	18	22	19
High ($)	55	59	32
Low ($)	6	1	2

Land Leasing Survey Results for the Roanoke Valley Region (Includes Alleghany, Bedford, Botetourt, Craig, & Roanoke Counties)				
	Pasture*	Cropland*	Whole Farm*	
Responses	9	6	5	
Weighted Average Cost	12	19	10	
High ($)	49	34	19	
Low ($)	5	3	2	
* Responses in which the farm land was rented at no cost were not included in these calculations				

2003 Land Rental Guide for the Shenandoah Valley

By Bill Whittle & Tom Stanley

During late fall 2002, Northwest District Farm Business Management Extension staff surveyed Shenandoah Valley farmers in 10 counties (Augusta, Bath, Clarke, Frederick, Highland, Page, Rockbridge, Rockingham, Shenandoah, and Warren) on land rental values. A total of 317 landowners and tenants representing 652 separate lease agreements responded to the survey. Respondents were split almost evenly between landlords and tenants with 51% landowners and 54% tenants. Several respondents indicated that they were both a landlord and a tenant.

This information is used by landowners, tenants, and agricultural lenders as a starting point for determining fair market rental value for land. Terms of leases vary greatly from contract to contract. Of those answering the survey, 33% said that their lease agreement was a written document while 67% said that their lease was oral. In many situations individuals had both oral and written lease agreements.

The tables summarize results of the 2003 survey. Since not all categories are applicable to all counties, only those counties for which data are available were included in the tables. They provide the average rental rate and length of lease based on land use as well as the range involved with lease rates and length of lease that has been negotiated.

Averages are reported by county and for the Shenandoah Valley. All averages are weighted averages; larger tracts of land rented at a given rate have more influence on the overall average rate than a small parcel of land. Rental rates are reported for the following categories: pasture per acre and pasture per head; good cropland (ability to average more than 100 bushels of corn equivalent in a typical year); average cropland (averages less than 100 bushels of corn equivalent in a typical year—this category also includes hay land); whole farm leases and dairy farm leases.

The reliability of the average figures reported increases as the number of responses increases. Within a rental category the very high rental rates were generally for smaller parcels of land and the very low rental rates often had other circumstances involved such as the desire by landowner

to maintain Use Value tax rate on the parcel or a family relationship between landowner and tenant.

This year we requested information on barter leases. Twenty-seven respondents noted that they were renting land on barter. They would have represented 7.8% of all replies if they had been incorporated in the survey results. Barter situations are complex and difficult to compile as an average and range because each barter is different. However, some broad similarities were determined. Most barter rentals involved hay and pasture, and the vast majority dealt with less than 30 acres. In most situations, the tenant had to keep the land mowed and cleared of heavy brush. In several instances, year-round caretaker responsibilities such as mowing the lawn and snow removal were involved.

Table 1

County	Pasture Per Acre				
	# Farms	Average Length of Lease (Months)	Average Rate Per Acre Per Year ($)	Low Rate per Acre ($)	High Rate per Acre ($)
Augusta	92	19	20.20	10.00	50.00
Bath	4	23	16.92	5.00	25.00
Highland	19	14	14.23	4.29	45.00
Rockbridge	9	31	10.31	5.00	17.00
Rockingham	62	20	29.30	10.00	80.00
Clarke	13	19	19.88	6.00	40.00
Frederick	10	24	17.76	7.00	40.38
Page	22	13	16.22	1.33	40.00
Shenandoah	29	19	17.55	8.00	60.00
Warren	3	14	9.96	5.55	14.81
		Total			Actual Range
Valley Average	263	19	**19.93**	1.33	80.00

Table 2

County	Pasture per Head				
	Cow-Calf				
	# Farms	Average Length of Lease (Months)	Ave Cow/Calf Rate per Month ($)	Low Rate per Month ($)	High Rate per Month ($)
Augusta	7	8	8.29	5.00	10.00
Highland	9	9	6.39	5.00	17.00
Rockingham	5	10	6.76	1.66	10.00
	Stocker				
	# Farms	Ave Length of Lease (Months)	Ave Stocker per Month ($)	Low Rate per Month ($)	High Rate per Month ($)
Augusta	11	9	6.34	2.00	13.00
Highland	3	8	5.73	5.00	6.20

Table 3

County	Good Crop Land*				
	# Farms	Average Length of Lease (Months)	Average Rate pr Acre per Year ($)	Low Rate per Acre ($)	High Rate per Acre ($)
Augusta	45	26	41.57	12.00	100.00
Bath					
Highland					
Rockbridge					
Rockingham	50	20	53.56	15.00	150.00
Clarke	5	34	21.35	15.00	50.00
Frederick	3	12	23.70	20.00	25.00
Page	6	12	38.95	25.00	45.00
Shenandoah	20	24	28.69	15.00	50.00
Warren					
Valley Average	129	23	**40.45**	12.00	150.00

* In certain counties cropland was combined into one category, either Good Crop Land or Average Crop Land, because too few responses were received to differentiate between good and average cropland.

Table 4

County	Average Crop Land*				
	# Farms	Average Length of Lease (Months)	Average Rate per Acre Per Year ($)	Low Rate per Acre ($)	High Rate per Acre ($)
Augusta	29	19	26.94	10.00	60.00
Bath	5	12	10.83	2.00	36.67
Highland					
Rockbridge	5	22	23.51	10.00	35.00
Rockingham	32	18	41.63	17.50	80.00
Clarke					
Frederick	7	12	23.59	15.00	25.00
Page	6	19	30.06	15.00	40.00
Shenandoah	16	21	26.15	11.00	45.00
Warren					
Valley Average	100	18	**27.08**	2.00	80.00

* In certain counties cropland was combined into one category, either Good Crop Land or Average Crop Land, because too few responses were received to differentiate between good and average cropland

Table 5

County	Whole Farm*				
	# Farms	Average Length of Lease (Months)	Average Rate per Acre Per Year ($)	Low Rate per Acre ($)	High Rate per Acre ($)
Augusta	41	26	23.70	5.13	100.00
Bath					
Highland	4	12	7.94	5.00	22.73
Rockbridge					
Rockingham	23	19	38.48	rate	98.48
Clarke					
Frederick					
Page	5	48	28.50	20.00	50.00
Shenandoah	13	22	16.05	5.75	30.00
Warren					
Valley Average	86	24	**24.74**	5.00	100.00

* Whole farm leases often contain a mix of pasture, cropland, and wooded land. Structures such as barns or shelters and facilities such as corals are often included.

Table 6

Valley Dairy Farms*					
# of Responses	Average Length of Lease (Months)	Average Rate per Farm per Year	Average Rate per Farm per Month	Low per Month	High per Month
10	47	$145.77	$2,011.67	$833.33	$4,800.00

* Dairy farm leases include milking facilities and some land. Residences are occasionally included.

Table 7

Inputs in Addition to Cash Rental Rates*		
	Tenant Supplies	Landlord Supplies
Fertilizer	50%	
Lime	33%	13%
Weed Control Labor & Material	44%	
Herbicides		11%
Minor Repairs of Fence Coral & Building	62%	
Fence Building Supplies		46%

* Other tenant-supplied inputs for pasture included bushogging or clipping. Other landowner-supplied inputs included electricity for livestock, water, and electric fence.

The Management Calendar

By Gordon Groover

The start of the second quarter of 2003 was a little rough – Blacksburg got 8 inches of snow on March 30. Yet last year at this time, most farmers in the East were concerned about drought conditions and the prospects for an even drier summer. As we start a new production season, drought condition worries have been relieved from a winter of rain and snowfall, but farm business managers' worries have not subsided. This year starts a new year with higher energy costs that will impact prices of all petroleum-based products (diesel, pesticides, nitrogen fertilizers…) and bulk commodities that must be shipped long distances. The best way to get a handle on cost control of petroleum related expense is to review last year's crop, livestock, and financial records looking for trends and problem areas and to identify the top five cash expenses.

Bill Brant (retired Virginia Tech Farm Management Specialist) illustrates the **key** point for any decision using the following Virginia Tech agronomic data presented in an updated example from the 1980 budget guide. Consider the response of corn grain on Congaree, Davidson, and Cecil soils to varying levels of nitrogen (Table 1). From the data presented, the productivity of the soils for producing grain declines from left to right with Cecil being the least productive. As additional nitrogen is applied the yield of corn grain declines. The largest response to nitrogen is to the first 40 lb. application.

Table 1: Corn Yield Response to Nitrogen on Different Soil Types

	Increased corn yield/ac		
Nitrogen increment Lbs.	Congaree	Davidson	Cecil
0-40	32	45	11
40-80	24	20	6
80-120	19	10	4
120-160	14	6	1
160-200	8	3	1

This marginal analysis provided by data in Table 2 looks at the cost of the incremental increase (40 lbs.) in nitrogen and the added value of the incremental increase in corn grain yield for the three soils. Table 2 is based on $0.25 per lb. for nitrogen and corn grain sales of $2.50 per bushel. The values in Table 1 are multiplied by their prices yielding the marginal cost or value of a change in yield. Therefore, a farmer looking to make efficient use of nitrogen on these three soils would apply the first 40 lbs. of nitrogen on the Davidson soil followed by two 40 lb. applications to the Congaree, then the Davidson, and so on. The first unit of nitrogen would not be applied to the Cecil soil until 160 lbs. had been applied to the Congaree and 80 lbs. were applied to the Davidson. Under the stated prices, 200 lbs. (Congaree), 160 lbs. (Davidson), and 120 lbs. (Cecil) of nitrogen are the best or profit maximizing choices. Note: Applying more that the levels listed above leads to a decline in profits from additional nitrogen fertilizer applications.

Table 2: Marginal Analysis of Corn Yield Response to Nitrogen (Corn at $2.50/bu. & Nitrogen at $0.25)

		Congaree		Davidson		Cecil	
Nitrogen increment Lbs.	Cost of each increment of N	Value of increased yield/ac	Net benefit of increased yield	Value of increased yield/ac	Net benefit of increased yield	Value of increased yield/ac	Net benefit of increased yield
40	$10.00	$80.00	$70.00	$112.50	$102.50	$27.50	$17.50
80	$10.00	$60.00	$50.00	$50.00	$40.00	$15.00	$5.00
120	$10.00	$47.50	$37.50	$25.00	$15.00	$10.00	$0.00
160	$10.00	$35.00	$25.00	$15.00	$5.00	$2.50	-$7.50
200	$10.00	$20.00	$10.00	$7.50	-$2.50	$2.50	-$7.50

Now consider the current situation when nitrogen prices increase to $0.40/lb. Table 3 illustrates the profit maximizing reduction in nitrogen usage for these soils with a 60% increase in nitrogen price and corn price remains the same. Total nitrogen usage on the Congaree does not change however, nitrogen is reduced by 40 lbs. on the Davidson and the Cecil only receives 40 lbs. total.

Table 3: Marginal Analysis of Corn Yield Response to Nitrogen (Corn at $2.50/bu. & Nitrogen at $0.40)

		Congaree		Davidson		Cecil	
Nitrogen increment Lbs.	Cost of each increment of N	Value of increased yield/ac	Net benefit of increased yield	Value of increased yield/ac	Net benefit of increased yield	Value of increased yield/ac	Net benefit of increased yield
40	$16.00	$80.00	$64.00	$112.50	$96.50	$27.50	$11.50
80	$16.00	$60.00	$44.00	$50.00	$34.00	$15.00	-$1.00
120	$16.00	$47.50	$31.50	$25.00	$9.00	$10.00	-$6.00
160	$16.00	$35.00	$19.00	$15.00	-$1.00	$2.50	-$13.50
200	$16.00	$20.00	$4.00	$7.50	-$8.50	$2.50	-$13.50

Similar points could be made as prices of both corn grain and nitrogen are changed. However, the key concept is to match the input usage with the expected returns. This concept applies to most inputs for crops and livestock. Be sure to use your crop and livestock records to support your decisions to use inputs (fertilizer, seed, fuel, pesticides, feeds…) and for culling and/or cropping plans. From this simple example, a prudent farmers should always ask, will 40 more pounds of N per acre or 5 more pounds corn per head per day lead to more profits or will it lead to more losses?

Calendar Items

Listed below are the items that need to be included on the farm business managers' calendar for spring of 2003.

- When working with family members and employees, be sure to reward them for jobs well done and suggestions for saving costs. The human side of tight finical times often leads to low moral, just when employees need to be at their peak performance. Make sure that their contribution to the farm's welfare is recognized; this praise and recognition can be a major motivating factor for many employees.

- Prepare crop record keeping system for a new year. If you do not have a crop record keeping system, consider purchasing the Doane's hand-kept crop and machinery notebook, "Field and Equipment Record Book." This notebook provides an inexpensive way of getting started. It can be ordered via the Internet at http://www.doane.com/bookshelf/shop.php or by calling (800) 535-2342, Extension 220. The price is less than $20.00. For a selection of computerized crop record keeping software take a look at the Agricultural Software Directory from Alberta Agricultural Food and Rural Development site: http://www.agric.gov.ab.ca/agdex/agsoft/index.html

- This year with higher prices for inputs keeping track of quarterly cash flows is critical. Compare them to the projected or historical cash flows, watching for problems. Actual inflows or outflows that differ from their projections may not signal a problem, but understanding why there are differences will help you understand changes in the farm business.

- Review first quarter livestock records and compare them to last year's; look for problems and successes.

- *Make sure your Virginia state income taxes are mailed in before May 1.*

- Update your marketing plan by collecting information on prices and world market situations. Be sure to check with your local Farm Service Agency for changes in government programs and signup deadlines. Review USDA and other crop and price forecasts. The release dates of most USDA reports are posted on the USDA Agency Reports Schedule Calendar and can be viewed at: http://www.usda.gov/news/releases/rptcal/may2002.htm. Be sure to monitor Wayne Purcell's Weekly Agricultural Commodity Market Report for critical market development information. The report is found at: http://www.ext.vt.edu/news/periodicals/purcell/

- Follow-up with your lender to review and update line-of-credit needs.

Now is the time to put your plans into action and enjoy spring, uh, when the snow melts.

You are invited to a *FREE* WATERSHED WORKSHOP

Watershed Management:

Putting the Pieces Together: A Session Designed for Locally Based Stakeholders

What: ***An Enhanced Watershed Management Planning Process Providing:***	***Agenda Topics:***
A Framework for a Coordinated Approach on: - Watershed Management Plan - TMDL Implementation Plan - Tributary Strategy Plan - Stormwater Phase 2 - Comprehensive Plan (including zoning ordinances) Ways to Enhance Watershed Management Planning Process: - New Input into Process - New Tools and Techniques Discussion of Personnel and Financial Resources	- What is watershed management planning? - Why prepare a plan? - Benefits to local jurisdictions - Who are the stakeholders? - Strategy to prepare plans - What resources are available to support watershed management?

WHERE:	**WHEN:**	**COST:**
NOVA CC, Manassas Campus, Colgan Auditorium	Tuesday, May 6, 2003 **8:15am-3:15pm**	FREE
VCU, Richmond, Commons Area	Wednesday, May 7, 2003 **8:15am-3:15pm**	FREE
Central VA CC, Lynchburg, 2133 Amherst Bldg.	Thursday, May 8, 2003 **8:15am-3:15pm**	FREE
DEQ Offices, Harrisonburg, Early Road	Tuesday, May 13, 2003 **8:15am-3:15pm**	FREE
VA Highlands CC, Abingdon, Auditorium	Thursday, May 15, 2003 **8:15am-3:15pm**	FREE
Hampton Roads Planning District Commission, Chesapeake, Regional Board Room	Thursday, May 22, 2003 **8:15am-3:15pm**	FREE

TO REGISTER Contact:

Lisa Blankenship, VA TECH
Phone: 540-231-6921
Email: lisab@vt.edu
Registration DEADLINE: 5 days prior to each event

Watershed Management Planning Workshops
Sessions May 6 - May 22, 2003
Agenda

Audience and Purpose:
Local government, PDC, SWCD, et al. staffs wishing to learn more about effective watershed management strategies, how to get more involved, or implement such strategies in their watershed/community.

8:15am – 8:45am	**Registration**
8:45am-9:00am	**Welcome and Introduction**
9:20am-9:35am	What Is Watershed Management Planning?
9:40am-10:10am	*Why Watershed Management Planning? —What watershed management planning can do for your community?*
10:15am-10:25am	***BREAK***
10:30am-11:30am	What happens w/o Watershed Management Planning?
11:35am- 12:35pm	**Lunch –On Your Own**
12:45pm - 2:35pm	*Watershed Management Planning In Virginia –How to begin the process. What are the costs? Introduction to Guide- Breakout Groups*
2:40pm – 2:50pm	**BREAK**
2:55pm – 3:15pm	Where do we go from here? Closing Statements
3:15pm	**Adjourn**

New Publications

By Karen Mundy

New from REAP: *The Role of Demand in Production Investment Decisions: The Case of the Virginia Wine Industry* by Wayne Purcell and Karen Mundy. There is interest around Virginia in expanding the wine industry. Studies have looked at the economic impact of the wine industry on the Virginia economy. This REAP report describes the role of the level of demand and elasticity of demand when producers of wine grapes or wine are looking at investing in expansion or new operations. The authors describe how the level of demand has increased since about 1994 after declining from a high in 1986. Apparently, demand increased even in 2001. But data show a glut of wine grapes in 2002. No information is available for 2002 on the demand for wine. The authors discuss the role of demand elasticity in estimating what will happen to total sales receipts if quantity is increased but demand remains unchanged. While economic concepts and terms are used to describe what is happening, the report is written for non-economists. This report can be found at the following web site http://www.reap.vt.edu/publications/reports/r57rev.pdf.

Calendar of Events

May

20	Innovative Grazing Field Day. Co-Sponsored by DCR, VCE, SWCD, NRCS, and VDACS. Doswell, VA. Contact: Jim Tate at (804) 537-5225 or e-mail: jim-tate@va.nacdnet.org

July

27-30	National Institute on Cooperative Education. Blacksburg, VA. Contact: Dixie Reaves at (540) 231- 6153 or e-mail: dixie@vt.edu