Virginia Cooperative Extension

Farm Business Management Update
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Farm Business Management Update is a joint effort of the Agricultural and Applied Economics faculty and the area farm management educators. 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 feel free to reproduce any article. However, please cite the title, author(s), date, and this newsletter.

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Winter Annual Cover Crops Increase Profits

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

Research on cover crops started in the 1940's. The book, Managing Cover Crops Profitably, 3rd Edition, which is published by Sustainable Agriculture Network, discusses how and why cover crops work and provides an extensive listing of cover crops.

There are a number of benefits to planting cover crops. Cover crops provide soil cover which helps prevent soil erosion by wind and water and reduces leaching (nitrogen and phosphorus) into surface water and groundwater. Cover crops improve soil fertility by adding organic matter to the soil and furnish moisture conserving mulch. Legume cover crops (e.g. red clover) have tap roots that can penetrate hard pans and reduce soil compaction. Certain cover crops can supply nutrients to cash crops and thus reduce purchased fertilizer inputs.

Sometimes the cash crop does not use all the available nutrients (e.g. nitrogen, phosphorus, potassium, etc.) in the soil at the end of a growing season. Non-legume species (e.g. barley, cereal rye, wheat) absorb existing available soil nitrogen by recycling nutrients and preventing nutrient leaching. Decomposition of the roots and above ground biomass results in the nutrients becoming available for crops in the next growing season.

A major benefit of legume cover crops is their ability to fix atmospheric nitrogen that can be used by the subsequent crop. Consequently, the legume cover crops can supply a significant amount of needed nitrogen to grow the following crops; e.g. grain and sweet corn, grain sorghum and vegetables. Table 1 shows average biomass yields, pounds of nitrogen fixed, and savings in nitrogen costs of several legume cover crops.

Table 1. Average biomass yields, pounds of nitrogen fixed and savings in nitrogen costs of several legumes. Nitrogen $.60 per pound

Cover Crop	Biomass tons/acre	Nitrogen lbs. per acre	Savings in purchased nitrogen
Hairy vetch	1.75	100	$60.00
Crimson clover	1.40	100	$60.00
Cowpeas	1.75	130	$78.00
Source: Managing Cover Crops Profitably, 3rd Edition			

Popular winter annual cover crops in Virginia are barley, wheat, and cereal rye. These crops can be planted with greatest success using a no-till or conventional grain drill. If the seed is broadcast, the field should be rolled with a cultipacker after planting to ensure good soil to seed contact. Barley, wheat, and cereal rye can be planted as winter cover crops in Virginia starting September 1. Cereal rye that is planted in early September is an excellent cover crop since it usually has more growth in the fall than barley or wheat. In order to reduce seed costs, producers may sow saved seed. However, farm produced seed should be cleaned before planting. It is recommended that producers conduct a germination test for bin-run seed because germination levels will influence planting rates. Virginia Tech agronomists recommend barley, wheat, and cereal rye be planted at the rate of two bushels per acre for winter annual cover crops. The cost

of grains used in cover crops depends on the market price for grains. In late spring 2011, the cost per bushel for bin run barley, wheat, and rye are as follows: barley (~$6.00), wheat (~$9.00) and rye (~$8.00). Producers in other states should contact their local extension offices to determine seeding rates and planting dates for winter annual cover crops in their states.

Cover crops can be killed by plowing, spraying burn down herbicides, or rolling using a roller/crimper. Plowing is energy intensive and typically reduces soil organic matter. By using burn down herbicides or a roller/crimper, crop residue is left on the soil surface which reduces erosion and provides mulch that can conserve water.

Virginia producers are eligible to receive a $35/acre cost share and state tax credit from their local soil and water districts to establish vegetative cover on cropland. This cost share practice is intended to provide an incentive to keep a vegetative cover on cropland during the winter months. In addition, the cost share will offset a portion of the cost of seed and the planting operation. In order to receive the cost share, producers must qualify for and comply with the Virginia Department of Conservation and Recreation rules regarding planting dates, seeding rates, and the cover crop must be killed using mechanical or chemical means or by grazing no earlier than March 15 and no later than May 15. Cost share programs are conducted by soil and water districts in many states to pay for all or part of the costs of associated with growing cover crops.

Planting annual cover crops can be a win-win proposition for the environment and producers' pocket books. Cover crops reduce soil erosion and nutrient leaching into surface water and groundwater. Producers can reduce purchased fertilizer inputs by planting cover crops, which absorb existing soil nitrogen and recycle nutrients from the previous crop. In addition, legume cover crops will fix nitrogen, which will reduce the purchase of expensive nitrogen inputs for the subsequent crop.

Strengthening Virginia's Community Viability through a Statewide Food System Assessment

By Matt Benson (mcbenson@vt.edu), Graduate Research Assistant, Agriculture and Extension Education, Virginia Tech; Lisa Hightower (lisah829@vt.edu), Graduate Research Assistant, Agriculture and Extension Education, Virginia Tech; Eric Bendfeldt (ebendfel@vt.edu) and Crystal Tyler-Mackey (cmtyler@vt.edu), Extension Specialists, Community Viability, Virginia Cooperative Extension

The University of Virginia and Virginia Tech convened the Virginia Food Security Summit in May of 2007 with several goals. One of its goals was to explore the development of a stakeholder roundtable or state-level Food Policy Council to develop an integrated food system strategy for Virginia.[1] From the summit and through the work of a diverse steering committee, the Virginia Food System Council was formally established in 2009. Although the Council accomplished a number of organizational and project-related goals throughout 2009 and 2010, Virginia still lacked a comprehensive plan for developing and strengthening its local and regional food systems.

In the fall of 2010, Virginia Tech's College of Agriculture and Life Sciences (CALS) issued an announcement seeking proposals for the CALS 2010 Integrated Internal Competitive Grants Program. The goal of this grant program was to enhance the linkages between research, Extension programs, and educational courses among the diverse disciplines within CALS. An interdisciplinary team from across Virginia Tech CALS collaborated to submit a proposal with the goal of generating a statewide food system assessment to assist in the development of a Virginia Farm-to-Table Plan. Many states have recently completed statewide food system assessments including Iowa, North Carolina, Colorado, and Vermont. A food system assessment offers a baseline that describes the current system while identifying the most critical and potentially effective areas to create change. Conducting a food system assessment can also bring greater awareness to the issues surrounding the food system, such as food security, environmental protection, agricultural production, and community-wide economic development.[2] Food system assessments allow communities to "identify gaps and needs in the community and the resources, services, and systems that could be used to fill the gaps and meet the needs of the residents" (p. 8).[3]

Virginia is currently in the process of completing its food system assessment and working to develop a statewide farm-to-table plan. In addition to Virginia Tech CALS and Virginia Cooperative Extension, this project includes broad-based partnerships with the Virginia Food System Council and Virginia State University. One of the primary activities as part of this food system assessment was to conduct a statewide survey with the goal of prioritizing Virginia's needs for strengthening its local, regional, and statewide food systems. This survey was developed in early 2011 and distributed online during March and April of 2011. In addition to facilitating an online survey, a series of regional listening sessions were hosted in March and April of 2011 to gain public input for developing the Virginia Farm-to-Table Plan.

Stakeholders from a wide range of sectors within the food system provided input to both the survey and the listening sessions. Preliminary findings from the survey show that 1,134 participants completed the survey from over 400 zip codes across Commonwealth. Survey respondents were primarily female (approximately 60%, n=465) and identified themselves as Caucasian or white (95%, n=685). Survey participants represented all aspects of the food system including the agriculture production sector (33%, n=372), agricultural processing and distribution sectors (3%, n=32), and food service, education, and government sectors (64%, n=730).

Within the survey, participants were asked to rank 34 items from 1 to 4 in terms of their level of importance to strengthening Virginia's food systems, where 1 was not important and 4 was very important. The items covered four major categories including 1) business and production management, 2) market development, 3) food system planning, management, and policy, and 4) food security, food safety, diet, and health. Preliminary survey findings show that participants rated "Understanding by government officials of the economic, environmental, and social issues surrounding the local food system" as the highest priority among all items (See Table 1). The second highest rated item was "Development of food outlets with local and regional foods." Preliminary survey findings also show that participant rated "Implementing a tracking system for products as they travel through the supply chain" as the lowest priority among all items. The

second lowest rated item was "Research on food safety risks to consumers within a local or regional food system."

Table 1. Top Ten Priorities for Strengthening Virginia's Food Systems

Rank	Item	Mean Score (std. dev.)
1	Understanding by government officials of the economic, environmental, and social issues surrounding the local food system	3.63 (.640)
2	Development of food outlets with local and regional foods	3.61 (.650)
3 (tie)	Land-use planning and zoning considerations for food system needs	3.53 (.683)
3 (tie)	Implementing a tracking system for products as they travel through the supply chain	3.53 (.663)
3 (tie)	Economic impact of local and regional food systems on localities	3.53 (.644)
6	Consumer focused educational programs on healthy eating and cooking with local and regional foods	3.48 (.741)
7 (tie)	Development of markets for local and regional foods to meet the needs of educational institutions and hospitals	3.47 (.726)
7 (tie)	Environmental impacts of local and regional systems on localities	3.47 (.708)
9	Education on identifying local marketing opportunities	3.46 (.722)
10	Training, knowledge, and support to develop comprehensive business plans	3.45 (.733)

Next steps of the Virginia food system assessment include analyzing data from the listening sessions and qualitative portions of the statewide survey. Combining these results with secondary data and quantitative data from the statewide survey, a comprehensive Virginia Farm-to-Table Plan will be published in late 2011. It will then be offered to local and state policymakers and organizations with the goal of implementing recommendations contained within the plan.

References

[1]Bedarf, A. T. (2007). *The Virginia Food Security Summit Final Report Findings and Recommendations*. Retrieved from http://www.virginia.edu/ien/foodsummit/docs/FINALREPORT_0904.pdf

[2]Jacobson, M. (2007). Food matters: Community food assessments as a tool for change. *Journal of Community Practice, 15*(3), 37-55.

[3]Cohen, B. (2002). *USDA community food security assessment toolkit (E-FAN No. 02-013).* Retrieved from United States Department of Agriculture's Economic Research Services website: http://www.ers.usda.gov/publications/efan02013/

The Management Calendar

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

Listed below are the items that should be considered for inclusion on the farm business managers' calendar for spring and summer of 2011:

- Half the business year will soon be behind us and 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 2010 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 be sure to keep in touch with your lender. They all know that we are in a time of uncertain returns. Yet, it's just good business practice to keep them informed of major changes and that you are managing the situation.

- 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.

- Checking your credit rating in July should become an annual event. Independence Day should remind you that you should be independent from identity theft and credit mistakes. All individuals and business owners should annually check their credit rating. 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.

Selective information available that might be useful for summer reading or bookmarking:

- **Updated Livestock Budgets:** Virginia Farm Business Management Livestock Budgets were updated and posted at www.pubs.ext.vt.edu/446/446-048/446-048.html. Most of the budgets are in both MS Excel® and PDF versions. The major categories are as follows:

    - Beef
        - Cow-Calf Budgets
        - Pre-Conditioning Budgets

        - Finishing Budgets
        - Stocker Steer Budgets
        - Stocker Heifers Budgets
    - Horse Budgets
    - Dairy Budgets
    - Fence Budgets
    - Sheep and Feeder Lamb Budgets
    - Goat, meat
    - Pork, niche market

- Want to understand the U.S. vegetable industry? Take a look at the USDA-ERS publication titled "Financial Characteristics of Vegetable and Melon Farms," by Mir Ali and Gary Lucier published in February 2011 at www.ers.usda.gov/Publications/VGS/2010/12Dec/VGS34201/VGS34201.pdf.

- If you want to expand your knowledge on a variety of research findings from the Economic Research Service of USDA, then sign up for the "Charts of Note." Once a day from Monday-Friday a graph or chart will be sent to you with a link highlighting one of their studies or reports. I find this a very useful tool to send me information I may not have looked for on my own. Go to http://www.ers.usda.gov/Updates/ to sign up. This page has multiple subscription services, including Chart of Note.

- A must read for all of us involved in agriculture is the current issue of "Choices," published by the Agricultural and Applied Economics Association and can be found at www.choicesmagazine.org/magazine/issue.php. This is a two-part series focusing on "Fundamental Forces Affecting Agribusiness Industries" and covers a variety of topics that are important to farmers, agribusinesses, and their advisors. Selected topics are as follows:

    - Healthy Competition in the Animal Health Industry
    - Fundamental Forces Affecting Livestock Producers
    - U.S. Meatpacking: Dynamic Forces of Change in a Mature Industry
    - Impacts of Product Differentiation on the Crop Input Supply Industry
    - Market Forces and Changes in the Plant Input Supply Industry
    - Forces Affecting Change in Crop Production Agriculture
    - Increasing Coordination in the Plant and Plant Product Processing and Handling Sector
    - The Changing Face of Food Retailing

- Considering growing produce or vegetables? Getting realistic estimates of labor requirements and costs can be a difficult task. A short article by Tim Woods titled "Labor Expenses for Vegetable Production" and published in the "Economic and Policy Update" from the University of Kentucky, Department of Agricultural Economics, and can be found at http://www.ca.uky.edu/cmspubsclass/files/EconPolicyUpdateMay2011.pdf.