Food Wanted

BY TOM MCCONNELL, DIRECTOR, WV SMALL FARM CENTER, WEST VIRGINIA UNIVERSITY

Food Wanted – for WV Small Farm Conference and many more.

People learn by doing. The more of something they do the better they become at it. The more someone participates in an activity the more he or she understands it, and the easier it becomes to get them to do it again. Some behaviors develop into habits. If people learn to eat locally produced and processed food out of the home they will grow to expect it

As farmers learn to supply food to commercial kitchens and restaurants they will become familiar with the process and soon think of ways to add more products into that market. From the farmers perspective each value adding decision is individual, but will be the result of an equation that includes (time versus time later + costs to add the value + market opportunity + storage expense) all divided by the need and desire to claim a larger, more secure market share. The West Virginia University Extension Service Small Farm Center has secured the opportunity to provide locally produced food for several conferences and special meals this fall and winter.

The goal is both educational and financial. Of the $7.1 Billion spent on food in WV last year over half was eaten out of the home. Each time another meal is “sourced” locally the process will become easier. All the food served at the West Virginia Small Farm Conference last February was grown, preserved, processed locally. The area farmers and local food value adders grossed $5000 for the 3 day Conference, this figure does not include on-site preparation. That effort also started several smaller local marketing opportunities for WV farmers as they found local bakers and restaurants who wanted to continue this process. Of course, that first one was not easy! But after the conference, when each of us had time to reflect, the question kept coming up, “What can we do differently next year?”

One thing, for sure, is to spread the word early. That is what we are doing. WE NEED YOUR FOOD! Another is to encourage each of you to contact us and share your thinking and product suggestions.

We were astounded as to how much food there was in the area, but it was obvious there were many things missing. Carbohydrates were well represented, all who attended will agree.

When you eat locally, you eat seasonally, too. So if a farmer wants some of the off season and traditionally processed food market he or she will have to find a way to either extend the season or preserve and process food. As a response to those who want only local produced fresh food what are the options for off season? I don’t see any way to eat locally and avoid eating preserved food. There is much food preservation research being conducted now on farms and at universities, but we are just learning how to get started. This tabloid is a discussion by Teresa Holloran of the WVDA about the process for preserving your products. If you are interested in that for your operation I would suggest that you contact her soon.

That way, you and she both have time to get the process developed.

Catching-up with an Old Friend

BY TOM MCCONNELL, DIRECTOR, WV SMALL FARM CENTER, WEST VIRGINIA UNIVERSITY

Buckwheat has never enjoyed the prestige of corn or wheat, or even oats in American agriculture but two hundred years ago it proved itself to have the right stuff. In 1816 a volcano in Tambora, Java erupted, spewing eleven cubic miles of dust and debris into the atmosphere. The cloud created lowered the planet’s mean temperature by one degree Celsius and shortened the growing season by half. Then came 1817; the year with no summer.

In July of 1817, after all the crops were up and growing a cold front struck the northeast and froze everything to the ground. The only seed most farmers had left was buckwheat; they swept off their granary floors. But the buckwheat grew, even in those harsh conditions and the crop carried the farmers and their livestock through the winter.

Those farmers were able to get a harvest because buckwheat can produce a crop in 70 days. And it tillers, or sprouts many stalks from a single seed. This allows farmers to reap a near normal crop even when the population of plants is weak due to poor seedbed preparation or lack of seed. Buckwheat needs little fertilization- foraging its own phosphorus from the soil. Indeed too much fertilizer will cause the crop to lodge, or fall over resulting with no yield.

Buckwheat was never viewed as the most important crop, but it was seen as a necessary and reliable crop- particularly in locations where the winters are hard, the springs late and the threats of late spring and early fall freezes are always present. Traditional tillage routines started with wheat sown in fall and oats sown first in spring. Potatoes were planted next and then corn in May “when the oak leaves are the size of squirrel ears.” Buckwheat went in last. The size of the planting was determined by how much ground was prepared in time for the other crops.

July sown buckwheat would allow farmers who didn’t have enough ground worked up for corn in early spring to still get a crop rotation by breaking sod after their first cutting of hay. Buckwheat had a reputation for being easy to establish on “just broken” sod-ground left rough from horse pulled plows and harrows. Buckwheat was, in short, a safety net.

There are several reasons why buckwheat as a crop has fallen by the wayside. Because it is self-fertile plant breeders and farmers are denied the opportunity to select for higher yielding cultivars. There have been improvements in plant breeding techniques to overcome some of those of those obstacles, recently. As a crop it is very low yielding compared to small grains grown across America. These days it is highly vulnerable to animal damage. When asked why he quit growing buckwheat after his family had for generations, Preston County farmer Jim Free-land replied, “The deer were bad enough, but when eighty turkeys cross your field, it’s all over.”

But the good news is that buckwheat’s sterility qualities are regaining recognition. It is very well suited to organic production and requires no herbicides to control weeds. In fact, it is used today as a “smother crop” and “green manure” in vegetable planting rotations. As a feed it is versatile. It was traditionally included in rations to fatten cattle and hogs- and was always included in scratch for the chickens. It was added to milk cow rations to bolster protein. And it is appetizing to humans.

During the Olympics in Nagano, Japan, Americans were introduced to soba noodles, made from buckwheat flour. Soba is becoming popular here, just as North American buckwheat is increasing in demand in Japan. In fact, the demand for buckwheat has never been greater and the increase in price is calling a few more growers out each year. The contract price for this year’s Buckwheat in New York is listed at $20 per 48 lbs. bushel; which is down three dollars from, last year. Buckwheat is gaining popularity among physicians and nutritionists as a “Super Food”. At 14% it is higher in protein then rice, mil-
Its all About the Food

BY TOM MCCONNELL, DIRECTOR, WV SMALL FARM CENTER — WEST VIRGINIA UNIVERSITY

If someone called a press conference in Charleston next week, took the stage with the Governor and the WV Development Office, and announced that a $7.1 Billion business was coming to the state in 18 months; cheers from the crowd would be heard all the way to Morgantown.

That business is already here! West Virginians spent that much on food in 2008. Agriculturally, we aren’t even close to meeting that demand locally. Adding census data to farmers markets estimates with some annual state sales estimates, we estimate that West Virginia farmers sold $25 million worth of food last year; not commodities- food.

If that news conference had happened and all of that $7.1 Billion was harvested in West Virginia the farm economy, would gross 20% or $1.4 Billion. That would equal approximately $60,000 dollars per farm. Just last evening I was challenged by a colleague about the validity of preserved foods with the argument that once something is no longer considered fresh it can come from anywhere in the preserved state. The point of expanding the WV Grown product line is product substitution. I have a friend who sold feed very successfully using that same philosophy by saying, “We can’t carry every product our customers asks for; we have to show them how our product will do the same job.” If we can grow it competitively to sell it to our neighbors then we have created increased farm income, more jobs, and certainly more food security. We are not trying to capture the entire food market; we should feel good about eating foods we can’t produce ourselves like citrus and avocados... and shrimp....... But we should think about our every food purchase and consider its impact on the local economy.

The product line will have to be more extensive than what we see at the local farmers market. The range of foods we would produce, process, and market most match what we eat. Not just the seasonal production. The product line must also include meat, milk, eggs, preserved and other value added products. This is a simple concept. Right now, the food is coming from somewhere other than West Virginia, so what do we have to do to get that business ourselves.

Our state leadership would be excited about the remaining 80% of that $7.1 Billion. It would be spent the on labor, utilities, and infrastructure required to process and preserve, store, deliver, and market this food to our neighbors.

There are four areas in which to focus to start the process of claiming more of our WV food dollar at home.

We are in desperate need of farmers. This is obvious as we observe the rapid increase in farmers markets and the competition for vendors. The dynamic here is that demand for farmers market fruit and vegetables items has grown faster than the capacity to produce. But, the WV farm community is responding to this great opportunity as the 2007 Census reports that the number of West Virginia farms that report growing vegetables for sale increased to 726; that is nearly twice the 365 counted in 2002. Developing a farm food community in the scale that can grow into a vibrant industry will require educating a new and young generation of farmers. Much of that will begin in the schools. The WVU Extension Service and many, many partners will be presenting new farmer classes starting this winter.

We must develop, nourish, and teach an entrepreneurial mentality in our small farm families. These farmers must assume a consumer driven mentality where their growing...
If you’re considering manufacturing and marketing a food product you are best advised to contact the West Virginia Department of Agriculture Marketing Division first. In the end we at the WVDA appreciate the fact that there is no greater personal satisfaction than one’s seeing recipe bottled and on a grocery store shelf and then hear a consumer rave about how good it is. We want to help you accomplish that.

Across West Virginia there is a strong demand for all types of vegetables this year. To satisfy this growing demand, growers have begun to adopt new strategies for producing horticulture crops. Every successful produce grower I have known adopts the strategy of sequential planting. That is, rather than grow one crop per season; each crop is planted in succession over the course of several months. This ensures that there is a continuous supply of produce throughout the season (early and late), and if one planting is damaged from weather, diseases, insects or wildlife, the other plantings compensate for the loss.

Vegetables in high demand in West Virginia such as green beans, tomatoes and sweet corn are three of the most common succession-planted vegetable crops and can be planted in most areas of West Virginia as early as late April through early July.

Small-scale plasticulture has been adopted by several horticulture crop producers in West Virginia. Plasticulture is using plastic mulches and drip irrigation to produce crops. Vegetables which thrive in heat such as peppers, tomatoes, eggplants and melons respond very favorably to black or red plastic mulch which can significantly warm the soil while suppressing weed emergence and soil moisture loss. Plasticulture prevents the growing crop from receiving too much water at any given time which can reduce flavor and increase cracking of fruiting vegetables such as tomatoes and melons. Warmer soil temperatures combined with even watering results in crops grown on plastic having higher yields and quality and more uniformity than bare-soil-grown vegetables.

For short-season crops, there are new photodegradable mulches available which decompose in 2-3 months without the need for removal from the field. In addition to having a continuous supply of fresh vegetables and fruits, diversity of color, size and shape is important when marketing many types of produce. Some interesting new vegetable varieties I have seen this season include: ‘Mirai Mini Sweet’ sweet corn, a small-eared corn with large kernels and great flavor; ‘Islander’ bell pepper, a lavender-colored bell pepper with good yields; ‘Strike’ green beans, a bush bean with a concentrated set of dark, green beans; ‘Mt. Glory’ an early-season tomato with good flavor and high yields; ‘Gypsy’ broccoli, a dark-green, small beaded variety; ‘Candy’ onion, a large, yellow onion with excellent yields; ‘Tropea’ onion, a red onion with excellent flavor; ‘Magda’ summer squash, a pale-green squash with unique flavor, and ‘Purple Passion’ asparagus, a purple-colored asparagus with sweet flavor. For more information on new vegetable and small fruit variety recommendations, contact Dr. Jett or look for an upcoming field day or production meeting in your area.
NO KANGAROOS in Austria

BY KELLEN MCNUTT

There are no Kangaroos in Austria. Austrians speak German not Austrian. I have learned many new truths in the past year. As an Agricultural Education student at WVU, I had the opportunity to study abroad this past school year in Vienna, Austria (Wien, Österreich). Through the WVU Office of International Programs and the Benjamin A. Gilman Scholarship, I was able to study and live abroad in the center of Europe for my final year of school. You may be familiar with Austria from the movie, The Sound of Music, or maybe even from Arnold Schwarzenegger. I did get to visit Salzburg and Graz, but that was only a small portion of what I was able to see.

I attended a University there called Bodenkultur Universität, BOKU. It is the only Agricultural, Environmental & Natural Resource University in Austria. I wanted the chance to study international agriculture and meet international people. BOKU offered just that. The population at BOKU is 18% international students. They have several degree programs that are offered in English. This opens the doors for many exchange students, as well as Asian and African countries to attend the university. Many of my professors were from all over the world and their research work was in various places as well. I loved the opportunity to learn about agriculture in conjunction with cultural differences.

Upon returning home, I am often asked the question, "What is agriculture like in Austria?" Some things stick out in my mind when asked this question. The first thing is the size difference. Each country in Europe could easily be compared to a state in the US. Austria alone is slightly smaller than the state of Maine with a population of 8.2 million people. Therefore, the farm sizes are also smaller. In 2003, there were 190,382 farms in Austria with an average farm size of 18.4 ha (45.5 acres). According to the USDA, there are 2 million farms with an average farm size of 418 acres/farm in the US. There are 42% full-time and 54% part-time farmers in Austria and in the US there are 69% full-time and 24.6% part-time farmers.

It was easy to describe West Virginia to Austrians, and vice versa, because their topography is quite similar. Austria just had bigger mountains and more flat, rolling land in between. Also, they seem very traditional in their farming practices and I never saw a big tractor. It was neat to be able to travel to several different countries and ask why they do things they way they do. A common theme that I found was that as you traveled throughout Austria and into other countries, there were definite and distinct dialects. It is common because we have similar dialect difference in West Virginia and the US. The southern part of WV sounds very different from the northern part; the same goes for Austria. I was learning a Viennese German living in Vienna and when I would speak to someone from Vorarlburg, Austria I had trouble understanding their dialect.

The perception of agriculture in Austria and Europe were different as well. In Austria and throughout Europe there is a very negative view on Genetically Modified or Engineered organisms. The Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft (Federal Ministry of Agriculture, Forestry, Environment and Water Management) states that, “Austrian agriculture does not believe that genetic engineering can provide any benefits and rejects it.” There are even ‘coexistence strategies’ in place within the European Union for GMOs and organic production. Organic farmers, but also conventional farmers, wish to abstain from genetic engineering production. Organic farming is a very popular endeavor in Austria. One in ten of the farms in Austria are organic farms and the number increases every year. I think the main reason there are so many organic farms lies in the desire for a high quality food supply. The number of organic farms is rising each year.

SEE AUSTRIA, PAGE 8

The Short, Long, & Sweet of West Virginia Farmers Markets

BY SUSAN SAUTER, WVFMA

Here’s the short and sweet of it: The number of West Virginia farmers markets jumped 55 percent from 44 in 2005 to 68 in 2009 and these numbers are still growing. The latest official West Virginia census was done in April by our organization, the West Virginia Farmers Market Association (WVFMA) at the request of the USDA’s Agricultural Marketing Service (AMS) who annually canvasses for the state-by-state figures. National funding for and research on farmers market programs is based on these findings and they are an important part of validating the economic development that farmers markets bring to communities.

To be counted a farmers market had to meet the USDA definition: a public and recurring assembly of two or more farmers or their employees, selling local agricultural products directly to consumers.

This excluded on-farm markets and Community Supported Agriculture farms that add to the direct market mix, but did not meet the USDA definition. The WVFMA Board divided up the state’s fifty five counties amongst themselves and proceeded to track down by e-mail and phone, markets heard about by word-of-mouth, in articles, and on the internet.

Here are some of the details about West Virginia farmers markets. No surprise--only a few are under permanent cover; most markets accept coupons from the Senior Farmers Market Nutrition Program – SFMNP (a program that gives $20 in coupons per qualifying senior, to be spent on fresh vegetables, fruits, herbs, and honey); about two-thirds participate in the similar Women, Infants, and Children (WIC) voucher program; and virtually none are set up for Electronic Benefits Transfer (EBT) – just what it sounds like, a way to exchange federal benefits (previously known as food stamps) for produce at a farmers market.

Although several are experimenting with or have markets year round, most markets are open only part of the year, beginning anywhere from April to July, and generally ending in September or October. About seven counties were surveyed as having no market, while others had as many as four. Saturday morning is still the most popular time of the week to host a market, but there are many mid-week markets too. A few even have evening hours.

About half the markets have a web page and about two-thirds have email; many are assisted by their WVU Extension Agent, who is listed as their contact. Complete results can be found on the homepage of our website at www.wvfarmers.org.

So far it seems West Virginia’s farmers markets are coming on strong, but nationally a conversation is being held about the flipside of success, that is, how to balance the number of farmers markets so as not to infringe upon current markets, or to add undue strain on one of the most limited resources of all—farmers. This is concern shared by the Farmers Market Coalition. Farmers market associations everywhere are experiencing an influx of calls, usually in the spring, from communities wanting a farmers market and “wanting it now.” Planning and research is ignored and poaching farmers from other more established markets is done to get theirs going. These are well intentioned economic development or even “wellness” efforts but what is not understood is that farmers are in short supply.

In places, West Virginia is experiencing this phenomenon as well. To keep farmers markets as strong as they can be, I hope we can embark upon a strategic plan to encourage new farmers to get on the land, convince backyard gardeners to step into the business of farming, and offer ways for new Americans to try their hand at growing food as a source of income. We all want to keep the future of farmers markets strong for the long view, well beyond the next farmers market census.
Safe Horse Keeping on a Budget

BY DR. HOLLY SPOONER, EXTENSION SPECIALIST—EQUINE, WEST VIRGINIA UNIVERSITY

For many West Virginians, horse ownership is more than just a hobby; it’s a way of life. However, given the current economic times, it may be more important than ever to find ways to save money without sacrificing your horses’ health or well-being. Most horse owners can safely save a few dollars just by following these ten cost-saving tips.

- When it comes to your horse’s diet, focus on forage first. Hay or pasture should be the basis of all horse diets and is always more affordable than concentrate feedstuffs, such as sweet feed. Select hay that is green, leafy, weed free, and debris free. Having hay analyzed for nutrient content can help you in determining how much your horses should be fed.
- Many mature horses at maintenance or under light work can do quite well on pasture or hay alone. Typically, they will require about 2% of their body weight in hay daily, or about 20 lbs. for a 1000 lb. horse. Overweight horses do not need concentrate feedstuffs (commonly referred to as “grain”), as extra body condition can lead to many health-related problems. Learning how to body condition score your horse can help you determine if he is at an appropriate weight.
- For many horses, pasture can provide the main source of forage. Practice good pasture management, including pasture rotation to get the most value from your horse pastures. Your county agriculture extension agent can help you test your soil and advise you on appropriate pasture management techniques.
- If your horse(s) require a concentrate in their diet, select a commercially-available horse feed made for their life-stage (such as growing horse, broodmare, or senior). These feeds are formulated to be nutritionally balanced for your horse. NEVER feed cattle feeds as they may contain additives that are toxic to horses.
- Work with your equine veterinarian to develop a preventative medicine plan for your horses. This should include annual vaccinations. Preventing diseases is much cheaper than treating the disease after the fact and is certainly better for your horses’ welfare.
- Learning how to administer your own

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Jackson’s Mill Market Garden

BY SARAH CROSS, MARKET GARDEN MANAGER; TOM MCCONNELL, DIRECTOR, WV SMALL FARM CENTER, WVU

Farmers markets, roadside stands and community supported agriculture have all enabled growers to capture a segment of the food market by dealing directly with consumers. But the fact remains; nearly half of the food consumed in West Virginia in 2007 was prepared and consumed outside the home. With this in mind the West Virginia Small Farm Center of the WVU Extension Service has embarked on a project to explore ways to get local food into the hands of professional preparers- restaurants and institutions- as a way to capture a segment of that $3.5 billion per year market.

In order to truly understand the hurdles a producer must face, the project director, Tom McConnell, decided to start from scratch by breaking ground for a new garden and then following the process all the way to a menu item at a local restaurant. WVU Jackson’s Mill State 4-H camp was chosen as the site for this project for several reasons. First, its suitability for an agricultural project was firmly established more than a century ago when it was farmed by the family of Thomas “Stonewall” Jackson. Next in importance is the proximity of the Jackson’s Mill Campus, whose kitchen spent nearly $200,000 on food last year alone. An additional consideration is the presence of an operating grist mill at the site. “There are plenty of ways to get our corn ground into meal,” noted McConnell, “But I think there’s a certain appeal to growing, processing, preparing and eating food all in one location.”

In April of this year a one and a half acre plot was fenced and plowed and started on the arduous journey to become a market garden. Two graduate students were hired to do the garden work as well as keep detailed records of every purchase, hour of labor and eventually how the produce is marketed. The project ultimately aims to find the most sustainable path for local farmers to get their food into commercial kitchens. The benefits to both sides are obvious. The farmer has an opportunity to expand the market for fresh, high-quality produce to fresh, more wholesome food and even the possibility of planning with the farmer new and different foods for years ahead. Some institutions have shown interest in this project, and some have been wary of making changes. The project will explore ways to respond to the commercial preparers’ concerns about how they will incorporate these products into their menus and preparation procedures. The project will experiment with preserving by drying, canning and freezing. It will examine the role of further processing, such as peeling and cubing potatoes as a means of value adding and product enhancing. And it will look at which crops and which varieties are best suited for this segment of the market.

“We think this project is important”, McConnell said, “Because it will benefit producers, preparers and in the end, consumers. The farmer will have a reliable market. The kitchen will have fresher ingredients with local origins. The diner will have a better meal.” The Small Farm Center is in a unique position to perform this study. It has the resources to take the risks and make the long term commitment that is required for such an undertaking and it has no incentive to keep “the secrets of its success”. Everything that is learned from this project will be shared with anyone who wants it.

As of the first week of August, there is little to report. The wet, cold spring slowed the planting. The intention to grow organic has been tested by a veritable plague of nut sedge. Deer conquered the first fence. These are the problems every grower will face. “The Bloody Butcher Corn is doing well, the potatoes are very good, and the dry beans look like they are going to make it”, reports McConnell. “Add some local ham and have one hearty, traditional, local for meal at Jackson’s Mill next fall.”
Horse

FROM PAGE 5

cines (with the approval of your veterinarian) may be a cost-saving technique.
• Also consult your veterinarian about your deworming schedule. Parasites are a major cause of colic and can certainly decrease feed efficiency. Deworming needs can vary depending upon age of horses, stall management, and more. There is no “one size fits all” deworming regime. Your veterinarian is best able to assist you in developing a plan to meet the needs of your animals.
• While there are some horses that may require stabling, allowing horses to spend time outdoors is better for both their health and your pocketbook! Bedding is one of the greatest expenses for horse owners and can be minimized by housing horses outdoors whenever possible. Horses with adequate haircoats can be comfortable in temperatures down into the teens, particularly if they can stay dry. If you must stable your horses, clean stalls daily to save on bedding loss and consider alternate bedding materials such as local wood shavings, recycled paper, or peat moss.
• Conduit a weekly farm safety check to look for down fences, protruding nails, holes in the pasture, and other safety concerns. If you own a horse you know they seem to seek out means of injuring themselves, so eliminate any opportunity to do so.
• Proper manure management can result in better fly control and, if composted, can yield a product that can be used as fertilizer or even sold to local gardeners! Your county agriculture extension agent can assist you in developing a manure management plan for your operation.
• When it comes to purchasing supplies for your horse, steer clear of products marketed specially for horses as they often come with a higher price. Many fly sprays for use on other livestock species can be used on horses. Need shampoo or conditioner for you equine partner? Visit your local dollar store for the lower priced human version!
• For additional horse-keeping tips including horse training advice and more, visit www.extension.org/horses.

Agriculture in the Classroom

BY JENNIFER WILLIAMS, ANR Program Director—WVU; Mary Beth Bennett, EXTENSION AGENT—Berkeley, WVU

Agriculture is the very basis of civilization—the food we eat, the clothing we wear, the material of and in our homes and many of our traditions and values...all come from agriculture and collectively set the pace for a nation’s standard of living. As generations of Americans become more distant from their agrarian origins, fewer and fewer people understand agriculture’s importance to society. Yet, increasingly, people with limited agricultural knowledge and background are determining agricultural policy. What the future holds for agriculture will determine the quality of life for all, farmers and ranchers, suppliers, food processor, wholesalers, retailers and consumers. Throughout much of the history of the United States, agriculture and education have been closely related. During the decades when most Americans lived on farms or in small towns, students often did farm chores before and after school. Indeed, the school year was determined by planting, cultivating, and harvesting schedules. Old school books are full of agricultural references and examples because farming and farm animals were a familiar part of nearly every child’s life.

In 1981 the United States Department of Agriculture established Agriculture in the Classroom, which has the endorsement of all living former Secretaries of Agriculture, the National Association of State Departments of Agriculture, the National Conference of States Legislatures, most of the state Governors, and the major agricultural organizations and commodity groups. Each state is responsible for organizing its own programs with support from the USDA. The USDA is responsible for coordinating the program and it sponsors regional meetings. Significant progress has been made through these partnerships of agriculture, business, education, government and dedicated volunteers.

Each state organization addresses agriculture education in a way best suited to its own needs. In some cases, an all-volunteer network is responsible for teacher education and materials distribution. In West Virginia the Ag in the Classroom program is sponsored through the West Virginia Farm Bureau with West Virginia University Extension Service and West Virginia University the lead institutions on teacher education through the West Virginia Summer Agricultural Institute. New in 2008/2009, West Virginia Farm Bureau’s Mobile Lab was teaching scientific lessons using agriculture to children across West Virginia.

Regardless of the structure, Agriculture in the Classroom has advanced because of a cooperative spirit among the participants. There is an AITC presence in every state and territory. Requests for information about Ag in the Classroom come from many countries around the world and from other organizations wanting to learn how to deliver their programs with equal success.

The first WV Summer Agricultural Institute was a week long program held in 1997 with West Virginia University Extension coordinating the training program and the West Virginia Farm Bureau providing support. The goals of the WV Summer Institute are to: (1) increase teacher awareness about agriculture; (2) give teachers the tools required to teach their students about the importance of agriculture in their daily lives; (3) encourage an understanding of agriculture on local, national and international levels; and, (4) increase awareness of important issues relating to agriculture. The institute goal is to increase agricultural awareness while making learning fun for both students and teachers. The institute also taught that agriculture touches our lives on a daily basis and is a tremendous platform from which to teach.

Last year, 65 educators attended the 2009 West Virginia Summer Agriculture Institute at the Ramada Inn in Morgantown. The strength of Agriculture in the Classroom comes from its grassroots organization and the fact that educators are very much a part of the movement. Giant strides have been made since 1981. Agriculture in the Classroom is regarded as a refreshing and flexible educational program designed to supplement and enhance the teacher’s existing curriculum. Agriculture in the Classroom makes leaning applicable and fun for everyone involved making it memorable while increasing knowledge about agriculture and how it impacts our daily lives. Agriculture in the Classroom works with K–12 teachers, and students to enhance education using agricultural examples. It offers school children the knowledge to make informed choices. Some students will choose agriculture as their life’s work. All students, as future voters, will make decisions about agriculture and be impacted by what happens in agriculture.

For more information on the National Agriculture in the Classroom program go to their website at: http://www.agclassroom.org/
Residents of Appalachia are blessed with abundant water resources that may be utilized to create a variety of fishing experiences. Private landowners have the opportunity to manage their water for recreation and food. Perhaps you have opportunity to enhance trout populations in your pond or stream.

**Water Quality**

**Temperature.** Though trout reproduce in clear, spring fed streams, they can survive and grow well in a wide range of environments, including ponds. The two most critical considerations are temperature and oxygen. For trout to survive the water must have adequate oxygen concentration and suitable temperatures at all times. Failure to meet the water quality demands of trout will result in mortality, regardless of the resources expended by the landowner.

Trout grow and survive best in water temperatures between 50 and 60°F. In very cold water and warm water growth is slower. Warm water is a much greater threat to survival than cold. It is recommended that trout have access to water below 72°F throughout the year. If you are uncertain about your water temperature, measure temperature at regular intervals throughout the summer. Water near the surface may exceed 70°F, but water near the bottom may remain cool enough for trout. A max/min thermometer is a convenient tool for measuring high and low temperatures. A pond owner may hang the max/min thermometer from the end of a dock at a depth of three feet and record the results on a weekly basis throughout the summer. Each time the thermometer is read, it is reset for the next interval. It is a good idea to maintain a pond record book, with water temperatures as your first entry.

Water temperature will vary during the year. Spring water will be between 50 and 60°F the entire year. Fish inhabiting this source could survive and grow for several years and reach a large size. In large ponds, water temperature may exceed 72°F in July and August. Elevation, pond depth, and downhill flow of spring water into the pond may create opportunity for trout to survive through the summer. Small shallow ponds with no flow will be too hot for trout to survive the summer. If your pond is too warm during the summer, you can still enjoy trout fishing. Trout can survive and grow in small ponds from mid October through April. The strategy would be to stock fish in the fall and harvest them before the water gets too warm. Management of seasonal ponds/streams will differ from cold water sources.

**Oxygen.** Trout are suited to waters with abundant dissolved oxygen (DO). At 55°F water saturated with oxygen will have about 10 mg/L. For good survival and growth, DO should be 60% of saturation (6 mg/L) or higher. Oxygen is not as easy to measure as temperature and may be much more variable. It can be measured with an oxygen test kit or oxygen meter.

In a pond, the warm summer months are expected to be the most critical time. Water with a green color may have a bloom of phytoplankton – microscopic algae. Oxygen levels in ponds where plants are abundant are usually lowest just before sunrise and highest late in the afternoon on a sunny day. This is due to photosynthesis of plants in the water.

Measure oxygen in the cool water that trout prefer. It is possible that this cool water will have lower oxygen levels than surface water. In the absence of oxygen measuring equipment, it is appropriate to use a few test fish to see if the environment is suitable. Stocking a few large fish in the spring and then confirming their survival with periodical angling through the fall. Another method is to place a cage in the pond and stock it with a small number of fingerling trout. Feeding the fish several times a week will allow observation of the fish and note their feeding behavior. Hungry fish are typically healthy fish. If mortality were to occur, it is much easier to find dead fish in cage than within the pond.

Other water quality considerations exist, but water temperature, and dissolved oxygen are most important. Presence of bass, bluegill, or minnows is a good indication that water quality is adequate. If there is a question regarding water quality, it may be necessary to have the water analyzed.

**Water Sources**

Groundwater is the most desired water source for trout because of its constant, cool temperature. Springs and seeps and even mine water may provide a constant supply of clean, cool, and oxygenated water. Streams may possess the optimal temperature but be lacking oxygen as it flows from the ground. As the water cascades over rocks and riffles, oxygen from the atmosphere will dissolve into it. Both oxygen and temperature may change as water flows over the land surface. Small streams of spring water will quickly warm and cool depending on its exposure to sunlight and wind. As such, a small spring distant from the pond may be no more beneficial than a small stream from surface runoff.

Like ponds, small streams may become too warm for trout to survive year round, but will support trout on a seasonal basis. Flowing water is not required for trout growth and survival. Neither is it essential that the water be perfectly clear at all times. In fact, cloudy water can decrease visibility and interfere with predation. Muddy water is not good. It may stress trout, reduce growth, and be aesthetically undesirable.

Ponds as small as 0.1 acre are suitable for trout. Even smaller pools can support trout if there is a continuous flow of cold water. It is recommended that the pond be at least 10 feet deep over one-quarter of the total area. Deeper ponds tend to have cool water on the bottom and provide refuge from herons and other predators that stalk fish from the pond’s edge.

**Fish**

Rainbow, brook, and brown trout are produced by WV farmers and available for stocking.

**Rainbow trout** is the trout most often grown in WV. They grow faster and larger than other trout species and are available year round. Under optimal conditions, they may grow more than an inch each month. Optimal temperature is 59°F. One vendor in PA sells a strain of rainbow trout that is reputed to be tolerant of warmer temperatures.

**Golden Trout** are a color variation of rainbow trout so their growth and behavior are similar. They have a reputation for being harder to catch than normal rainbow trout. Their bright color makes them easily seen by predators and anglers alike. The photo below shows the effect of pigment added to the feed. The fish on the bottom had no pigment added to the diet. Availability of golden trout is limited.

**Brook trout** are the only trout native to WV. The growth rate of brook trout is similar to rainbow trout to about a 10 inch size. Optimal temperature for brook trout is 58°F. They are easily caught, and for this reason, is a good choice for pond stocking. Brook trout are known for their brilliant colors and fighting ability when caught. Brook trout flesh is superior in both flavor and quality. They are also more tolerant of acidic water than other trout.

**Brown trout** are not normally chosen for pond stocking. Optimal temperature is 59°F. They are difficult to catch, grow slowly, and although they tend to survive longer, become cannibalistic when larger sizes (20 in.) are reached. Brown trout are prized by many fly fishermen for their fighting ability and for this reason may be a good fit for stream stocking. Care should be taken not to stock browns on native brook populations or with smaller fish due to their aggressive behavior and carnivorous nature.

Stocking several species together is effective and brings diversity to the angling experience. Occasionally hybrid trout are available. For example, Tiger trout is a hybrid between Brook Trout and Brown Trout. Regardless of trout species selected for stocking in a pond, they are not expected to reproduce. To maintain a population it will be necessary to periodically restock.

**Management**

The management strategy for a pond or stream is related to water temperature.

**Year-round.** A pond that is spring fed with sufficient flow so summer water temperature does not exceed 65°F is a good example of a year-round trout pond. These ponds also tend not to freeze over during the winter. Many management options exist for this type of pond.

Trout are generally stocked at two times of the year, spring and/or fall. Spring stocking,

**SEE TROUT PAGE 12**
Austria
FROM PAGE 4

and the demand for organic food. While I was grocery shopping I noticed the popularity of organic and natural foods from Austria. It was common to see “BIO” & “aus Österreich”, meaning “organic” & “from Austria”. Another important thing that stuck out to me while in Europe was the amount of recycling and renewable energy resources available. There were recycling bins throughout Vienna and all of Austria. It is technically illegal to not recycle in Austria. It was quite a shock for me to come back home and not recycle. The main reason why we don’t is because there is no place to take the recycling in most towns in West Virginia. Just from my home it would take at least an hour to travel to a place that collects recyclable materials.

When I was hiking in the Alps I saw many solar panels and while traveling on the trains I saw several wind turbines. According to Statistic Austria 2007, 21.36% of the Gross Domestic Consumption of Energy is from a renewable source of energy. Hydroelectric Power makes up 8.97% of the 21.36%. All the rivers and extensive mountainous areas in Austria make hydroelectric power possible. Forest covers 47.2% of Austria’s landscape; so biomass & biofuels are also a key resource in renewable energy.

Freshly Broken Sod in Burgenland, Austria

A healthy environment, food source and body seem to be a very significant in Austria. These are some of the basic truths that I have learned about Austria and come to cherish. My year abroad was price less and a huge blessing. It was great to see this beauty of the world, take a photo of it, and share the experience.

For even further information: the USDA does a thorough job of comparing the US & EU in their Agriculture and Trade Report, U.S. - EU Food and Agricultural Comparisons. The full report can be found at this link: http://www.ers.usda.gov/publications/WRS0404/WRS0404.pdf; or at the USDA Economic Research Service http://www.ers.usda.gov/. For more information on agriculture in Austria can be found at www.lebensministerium.at or on the Agriculture & Rural Development site of the EU: http://ec.europa.eu/agriculture/index_en.htm (in English).

If you are interested in more information and photos on my travels in Europe you can look at my blog at: http://fromabroad.blogs.wvu.edu/blog/tags/kmcutt.

Small Farms and Conservation: Why?
BY JOSHUSA FAULKNER, EXTENSION SPECIALIST—AG ENGINEER, WEST VIRGINIA UNIVERSITY

We all know the old adage that a good farmer has to be a jack-of-all-trades; a good mechanic, veterinarian, business person, etc. I would add to that list ‘conservationist’. Conservation is a broad term, but here I define it as ‘stewardship of the land and water’; this is not a new idea, neither is it a passing fad. Thomas Jefferson articulated a farmer’s responsibility and role of stewardship when he said that ‘While the farmer holds the title to the land, actually it belongs to all the people because civilization itself rests upon the soil.’ Indeed, historians have attributed the downfall of many civilizations to the degradation of natural resources essential to agricultural production. Furthermore, as science and experience has demonstrated, natural resource degradation often leads to negative environmental impacts and damage to human health. The connection between agriculture, the environment, and our daily lives is as close and as real as the food we eat and the water we drink. While agriculture’s impact on the environment in the United States has been greatly reduced in the past few decades, the fact that poor agricultural practices and lack of conservation have led to the demise of entire civilizations should still give us great pause. It reminds us that, by working closely with the land and water, we are continually charged with the stewardship of these most-important natural resources.

Admittedly, the idea that how we manage our individual farms, especially small farms, can destroy our culture as a whole may feel like a stretch. However, other, perhaps more tangible, reasons for agricultural conservation also exist. By conserving and protecting our soil and water, we ensure that our land continues to be productive and profitable, not only during our lifetime, but for those that come after us as well. This strikes a special chord with reference to small farms, as they are often family-owned and are passed down through bloodlines. Small farms, which make up 94% of the farms in the United States, are an important part of local economies, food supply, and a satisfying way-of-life. If we want our children and grandchildren to enjoy the sense of pride and pleasure that accompany such a way-of-life, conservation should be a top priority.

Furthermore, agriculture is often subject to negative perceptions within the environmental and public health arenas, some warranted, some not. Small farms, which are often scattered throughout other types of land-uses (e.g., residential and recreation), are often visible to a greater number of people than large farms. The implementation of some basic conservation practices can greatly improve those negative perceptions and increase agriculture’s social and political capital within a community. This is especially true if the practice results in changes that are apparent and visible to community members (e.g., those passing by on local roads).

Conservation is also part of being a good neighbor and being conscious of our impact on others’ environments and quality of life. For example, if pesticides leave our farm in runoff, where do they go? Who drinks that water? Wendell Berry, the farmer-author, summed it up best when he put a spin on a familiar piece of wisdom and advised us to ‘Do unto those downstream, as you would have those upstream do unto you.’ This advice hits home, especially when we, and our family and friends, all live in the community where we farm.

Ethical and/or religious beliefs are cited by some as justification for conservation. Aldo Leopold, one of our nation’s most influential conservationists, was one of the first to advocate conservation on private land. He believed we had an ethical obligation to do so; that obligation was born out of a personal relationship with the land. Religious traditions also talk of how we are to care for the Earth and treat it with respect.

Conservation does not always have to be difficult or expensive; some practices can actually lead to increased profits. Small farms are in an especially advantageous position to implement conservation measures, due to the fact that such practices are often very inexpensive when compared to those needed on much larger farms. While the reasons for caring for the land and water on our farms are many and varied, the end result is the same: a healthy, productive, and sustainable landscape that can support agriculture and surrounding communities in harmony for generations to come. Several local agencies exist to serve and assist you when a decision is made to take the next step. These agencies include the USDA-Natural Resources Conservation Service, West Virginia Conservation Agency, and WVU Extension Service.
Grazing Records Help Reduce Producion & Marketing Risk

BY ROGER NESTOR, EXTENSION AGENT—BARBOUR, WEST VIRGINIA UNIVERSITY; TOM MCCONNELL, DIRECTOR, WV SMALL FARM CENTER—WVU

It is common to hear farmers talking about their operations at the local coffee shop or farm supply store and make statements like “well, you can make money running yearling steers 3 out of 5 years”; or “about 200 – 250 pounds of gain on grass is about all you can expect in a summer.” Many times these statements are made with convincing authority that would make most people believe them. Unfortunately, many of these statements cannot be backed up with factual information. Twenty-four years of data generated at the Hubert Nestor farm challenges that rule of thumb mentality. If fact, their complete history of rainfall, beginning and ending weights, and expenses coupled with good management has produced a grazing operation that yields predictable performance that is greater than those old farmers’ tales.

What has been accomplished on the Nestor farm is a story with two parts. The first is the creation of the data set that allows farmers to relyably predict performance under multiple variables including cattle weights, rainfall amounts, and turnout dates. This data set is admitted from one farm and one farmer provides each of us a tool that allows us to “factor in” reliable performance expectations as we plan yearling operations and manage risk.

Second is how the cattle perform on this farm with the resources like so many of us have in West Virginia. What part of the performance has been the record keeping and analysis and what part has been the grass resource: and how do you know. They both relate to management. Each of us can do this, too.

Under the current tight credit situation and perpetual very slim profit margins it is noteworthy that this organization has collected many different types of information as it developed a management protocol to allow them to predict performance under many different weather histories and types of cattle. West Virginia farmers can use this information to help them turn out cattle with repeatable information. The record set includes

1. Average seasonal gain - At this farm, 311 pounds per head is the average seasonal gain. The availability of a 24 year data set should help with the development and use of pertinent “what if” spreadsheets that will help farmers better assess and subsequently enhance profit and sustainability.

2. Twenty-four years of contract grazing production data has been collected from one farm.

3. Costs associated with this contract grazing operation have been collected the past 16 years. …

4. Rainfall data has been collected the past 22 years.

Hubert and his wife Mae and family are in the midst of their 25th year of contract grazing beef cattle. They started developing and keeping good records. Now they have a tool that allows them to make decisions based on future performance. They have always cooperated closely with the WVU Extension Service and have tried to learn from their work. When asked what has helped them learn the fastest, “they replied,” The records. Without a record of what was done when, and what happened as a result of what was done, we would have been guessing. We have always had information from which to make management decisions.”

Initially, it was believed that the lighter, 400 pound class cattle would gain more weight in a season than the heavier 600 pound steers. Twenty-four years later, we know this is not true.

Hubert and Mae’s farm consists of soils that are part of the Gilpin channery soil complex. Yield potential of these types of soil is near the middle of the pack of the variety of soils that exist in Barbour County. They don’t have the worst soil resource but they surely don’t have the best either. When you have good records, you do not have to guess. You can plan. You can plan because your records can help you identify risk factors and what has happened in years past when these risk factors are in play. For example, Hubert’s records have helped in predicting how much gain to expect when the steers come in weighing a certain weight. Initially, it was believed that the lighter, 400 pound class cattle would gain more weight in a season than the heavier 600 pound steers. Twenty-four years later, we know this is not true. Over 340 pounds of gain has been gained by steers in both weight groups. What we do know is that on the average for 24 years, steers will gain about 311 pounds at this farm with Hubert’s management. His records for expenses and rainfall have also been valuable informational tools that are helping with risk management. If it is a dry season or wet season, Hubert can predict about what the steers will gain and will know ahead of time if he might need to adjust the field rotation or stocking rate. Knowing this has helped other contract grazing farmers time the marketing of their cattle to an earlier date, for the heavier cattle. Marketing the heavier cattle early allows for additional younger, lighter weight cattle to be added in mid-season which will allow for producing and marketing more pounds of beef from the farm. Good records help to identify what the real risks are that we might need to manage. What if it is a dry season? What if the season is wet? What gain can I expect if the cattle come in averaging over 600 pounds? Being able to predict the gain allows us to manage our input costs because we will at least have an idea of what the average income has been in previous years. Is it rocket science? No. Can everyone do it? Almost everyone can do it. Will any kind of management work to minimize risks? No. Management that is based on good records is the best way to minimize risks. Establish and use records to create a set of data that can help with management decisions for generations to come. Sustainability depends on managing risk-managing risk depends on

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Energy Tax Incentives

BY TOM MCCONNELL, DIRECTOR, WV SMALL FARM CENTER—WEST VIRGINIA UNIVERSITY

Most of us make decisions for reasons other than trying to capture a tax incentive. I decided to replace my roof recently, as well as three windows in my house. I made the decision because it needed to be done. If I had being thinking about tax management the decision would have easier because I qualified for a tax credit—almost. I made a mistake that turned out okay as after I made those improvements I checked to see if they did qualify. The steel roof I put on my house which I thought would not—did not. The Energy Start rated windows I installed which I was sure would—did not.

The American Recovery and Reinvestment Act of 2009 extended many consumer tax incentives originally introduced in the Energy Policy Act of 2005 (EPACT) and amended in the Emergency Economic Stabilization Act of 2008. That means that there is great opportunity for us as we make energy efficient improvements in our homes and businesses. There are state programs, too. The incentives are significant and just as they were intended should gently push you toward a decision to use energy efficient building materials and appliances. The opportunity to gain tax benefits is also possible when you are building new, too.

But to really benefit from these incentives you should first familiarize yourself with the programs (especially the lists of qualifying appliances, and home improvement supplies) and see how they match your energy savings ideas. The point of the program is to encourage the nation to buy energy-efficient appliances and building materials. To receive the tax incentives, all that is required of the consumer is simply to choose the certain appliances or remodeling materials that qualify for the program and keep records to use during tax preparation. It is common for consumers to incorrectly assume that buying products rated as “energy star” is all that is needed to qualify for a tax incentive. There are many goods that have that rating and do not qualify for the program. The tax incentive gained from this program varies but most commonly is at 30%. Unlike income tax deductions, which reduce your taxes by reducing your taxable income, tax credits offer a straight up, dollar-for-dollar reduction of your tax bill. In other words, a $500 tax
The licensee on Glen Facemire Jr.’s red Ford F150 reads “RAMPS.” He is, after all, the son of the Ramp Man. Glen Facemire Sr. earned the CB radio handle Ramp Man back in the day when he gathered all the ramps for Richwood’s annual ramp feed and ramp festival.

The event attracted 1,200 people to its 71st celebration this April. It’s too big for just one person to dig all the ramps needed – 1,850 pounds were at cooks’ disposal this year. Organizers pay ramp diggers to bring the ramps to them. Anyone can do it. There’s no record or regard to where the ramps came from.

Glen Facemire Jr. is trying to educate his neighbors, as well as, rampers all over the country about good stewardship of this native species. Through his book, “Having Your Ramps and Eating Them Too,” and his Web-based store for ramp seeds and bulbs, he leads them on the path to planting their own patches. He is also trying to generate interest in developing grown-up farms into ramp-growing enterprises.

Facemire is a naturalist who has seen stages of the ramp’s life cycle that most diggers have never seen nor cared about. But they should, if they want to protect diggers have never seen nor cared about. Stages of the Ramp’s Life Cycle that Most Facemires is a naturalist who has seen farms into ramp-grown enterprises.

The family’s 75 acres on a north slope in Richwood, where Facemire’s G-N Ramp Farm is now, has always been good for growing ramps.

“We would go back in the mountains,” Facemire said. “We would fish and we would dig ramps. We would take a bunch of half-gallon and quart jars and a big tub. We would build a fire and my mother would sterilize the jars and wilt the ramps. She’d put about a spoonful of salt to a half-gallon jar and she would lightly tighten the lids and put the jars onto boil for 1 1/2 hours. When they were finished, they were ready to come home and put them in the cellar.

“It wasn’t ‘Oh boy! We’ve got a delicacy here,’ ” he said. “It was just food, something to eat, one of the first foods to come up in the spring. It was good food and good for you.

“There is a lack of appreciation in putting ramps back,” Facemire said. When he and his wife Norene wanted to process and sell them in 1990, they started raising ramps by collecting bulbs and transplanting them in the spring and collecting seed and rebroadcasting it in the fall to be accountable for their harvesting and selling and to give back.

For a time, Facemire and his wife processed ramps into products they sold in their store on Richwood’s Main Street. Products included pickled ramps, dehydrated ramps, ramp gravy mix, ramp biscuit mix, ramp mustard, ramp jelly, ramp salt and ramp cheese dip. They still make those things for personal consumption, but all they sell on the Internet are seeds, bulbs and mature ramps. They closed their brick-and-mortar storefront in 1995 in favor of Web sales.

It’s not a reflection on the market. “We got older, we’re backing off,” Facemire said. “The demand just gets bigger all the time.”

The Facemires harvest 300-350 pounds of ramps from their farm every year.

In the coming year, they are considering harvesting only enough mature ramps for personal use and not shipping anything but bulbs and seeds, giving their ramp patches a Sabbath, letting them rest.

“Ramp Recipes

Facemire’s favorite way to eat ramps is sautéing the early spring bulbs with mushrooms. He also likes ramp gravy.

SAUTÉED RAMPS & MUSHROOMS

In February, dig bulbs. (They will not have leaves on them.) Clean, fry in butter with sliced mushrooms until ramps are tender. You may need to add a little water as they cook to keep them from burning. Cook on low heat to prevent the bulbs from browning. Stir often.

Serve with biscuits and white navy beans. Facemire says the bulbs’ flavor is best when served with only white foods accompanying them.

RAMP GRAVY

3 tablespoons bacon grease
3 tablespoons flour
1/4 cup finely crushed dehydrated ramps
1 cup milk (or more as needed)
Salt and pepper to taste

Soak finely crushed dehydrated ramps in enough hot water to cover the ramps. Soak for about 10 minutes. Drain liquid from ramps. Keep liquid to use in gravy.
ramps and marketing and selling them commercially,” Facemire said.

He wanted to be ready when someone approached his booth at a festival and said, “You’re not gonna take all the ramps in the woods, are you?”

The farm has been well-received. He turns away orders. “The demand is more than I can ever produce,” he said. “We have had to turn down restaurants and produce places. You could sell all the ramps you wanted to.”

That’s why he sees ramps as a cash-crop opportunity for family farms that have grown up. He gets requests from as far away as San Francisco, Washington and Alaska.

“It’s amazing how many people want to buy farmed ramps because of over-digging,” Facemire said.

“Down in North Carolina, in the Smoky Mountains, they have pretty much depleted the ramps. They are not allowed to dig anymore,” he said. “We have helped the Cherokee Indians by shipping our bulbs to plant to re-establish personal ramp patches.”

Ramps are also depleted in Japan; Canadians are allowed to dig only 10 ramps for personal consumption.

Right now, West Virginia rampers are no more aware of over-digging than they are another threat to the native ramp patches.

“I was reading in ‘The Market Bulletin’ about an insect that’s starting to invade alliums and they are fearful it will get into the native ramp population,” Facemire said.

Horticulturally, the ramp, allium tricocum, is a leafy cousin of other tuber sprouting onions and garlic.

“Here is where planting your own little ramp patch can help save the native species,” Facemire explained. “If and when this does happen, people can manage their own ramp patches by spraying or whatever they have to do to prevent the blight.”

### How to Plant Ramps

Ramps thrive on a north slope, but they can live about anywhere. Facemire had successful patches in Charleston. Folks expecting to see more immediate results should start with bulbs to establish their patches.

Facemire urges patience. It takes four or five years before the new plants have matured into a harvestable ramp.

He instructs future ramp farmers to site their patch in a hardwood forest where they can reach down and grasp a handful of this year’s fallen leaves, last year’s and leaves that fell the year before that. The soil will be moist and loose.

Ramps grow best in filtered sunlight. In open areas, they compete with grasses and weeds for moisture and nutrients.

Those who have ramp patches need to manage them, in the sense that when the seeds come on, they collect them and plant them, Facemire said.

To do that, rake away the leaves from an area.

Cup 10-15 seeds in your hand and, holding it 6-8 inches above the ground, let the seeds fall. Move the leaves back over the spot and stamp your foot down on the area to set the seeds in the earth and hide them from animals.

Because of the seed’s hard coat, it will be about 18 months till germination.

Dropping a handful of seeds like this ensures a pod of 8-10 ramps will grow there – making them worth the time of digging. But the seeds aren’t too close together that the resulting plants will crowd each other and compete for nutrients. Facemire said this is much like what happens in nature when turkeys are scratching for seeds.

“The demand is more than I can ever produce,” he said. “We have helped the Cherokee Indians by shipping our bulbs to plant to re-establish personal ramp patches.”

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Trout

FROM PAGE 7

April-June, allows for warming of the water following winter and an increase in natural food organisms. Fall stocking, Sept.-Oct., occurs when water temperatures begin to cool.

Number of fish and size to be stocked is relative to the pond owner’s goals. If immediate angling enjoyment is an objective, larger fish should be stocked. Stocking larger fish is more expensive and may not be economically feasible. Stocking of large fish rather than small fish will result in decreased mortality from stress, disease, and predation. It is important not to stock too many fish. Over stocking can lead to poor fish growth and mortality.

Harvesting of the trout should begin when they reach 8-10 inches (5-8 oz.). Few trout will live more than three years.

The following stocking rates are a conservative guide for stocking trout in an unfed pond. Over time, stocking rates can be adjusted to accommodate the food supply and fishing pressure. Ponds with many anglers and subsequent fish removal may be stocked at higher rates. Consider recording the number of fish removed from angling and natural mortality in a pond record book. This information may serve as a guide for subsequent stockings. If large fish are present in the pond, consider stocking a 5-7 fish rather than smaller fingerlings. Small fish may be eaten.

Landowners may also stock trout into streams running through their property. As long as there is suitable habitat, trout tend to stay near the stocking location. Trout stocked in a stream can also be fed floating pellets. Streams are considered public water so fish stocked in streams become property of the state. For this reason, a fishing license is required for anglers to harvest fish stocked in a stream. Fish in a private pond are considered the property of the landowner.

Supplemental feeding is an excellent way to increase growth and number of trout the pond can support. Intensive feeding, twice a day at 1% body weight, can dramatically increase the number of trout a pond can maintain. Feeding can be done by hand or using automatic feeders. Use a floating trout diet so it is easy to see if the fish are eating all the feed. Feed no more than the fish will consume in about 20 minutes. Feeding too much is a big mistake. Excess feed and trout waste can lead to algae and dissolved oxygen problems. Feeding should be reduced or suspended if water temperature is below 40°F or above 70°F. A judicious feeding program can accumulate an abundance of fish over time. A coffee can full of feed, once or twice a week, can benefit fish growth and provide the pond owner with the opportunity to see the fish eat. Watching the trout eat can also be a good means of assessing fish health.

Trout will grow best in ponds where the temperature does not fluctuate very much. Spring and fall are the times fish tend to grow best. Trout stocked in fertile ponds with adequate natural food supply should grow/gain ½ to 1½ inches per month.

Seasonal: A pond whose water is cool enough from Oct.-June, but whose temperature soars above 70°F from July-Aug. would be limited to a seasonal fishing strategy. Seasonal ponds may also be considered “put and take” fisheries. The key to successfully managing a seasonal trout pond is to only stock an amount of trout one can harvest before temperatures become too warm.

As with year-round ponds, seasonal ponds can be stocked in either the spring or fall, with the expectation that all fish will be caught-out before the following summer.

Spring stocking would involve the stocking of harvestable size fish (10-12 in.) or larger. Since removal of fish may begin as soon as pond is stocked, spring-stocked fish will not have an opportunity to increase in size. Therefore it is important to stock fish of a size that is acceptable to the angler.

Stocking fish in the fall can allow for the stocking of a large fingerling (7-8 in.). Although trout will not gain much during the winter months, late fall and early spring will be conducive to growth. Again, angling should start soon enough in the spring to ensure that the fish are removed before water temperatures interfere with the fish’s desire to take a bait.

Knowing how many fish to stock is relative to amount of angling expected. Fish caught should be retained by the angler.

Purchasing fish: There are numerous trout farms in WV. A listing of vendors can be obtained from your county extension agent, or from the WVU Aquaculture web site: www.wvu.edu/~ageoten/aquaculture/trifish.htm

Rather than spending your hard earned cash traveling to some distant location for a less than stellar day of fishing, consider creating a prize fishing hole of your own. This fall, stock some trout in your pond or stream, and then feed them. It is conceivable that you, your friends and your family can have many hours of convenient fishing and some deli-
West Virginia Agritourism

BY CINDY MARTEL MARKETING SPECIALIST—WVDA

West Virginia agritourism is flourishing this summer. A segment of the farming community that brings tourists to the farm or introduces them to farm products, initiatives such as Buy Fresh/Buy Local and Slow Food, as well as, the explosion in farmers markets throughout the state have encouraged farmers to look at creative ways to introduce consumers to their products and farms.

West Virginia Commissioner of Agriculture, Gus Douglass points to the creativity and entrepreneurial spirit of the state’s agritourism operators. “We are witnessing farm and agribusiness operators in our state celebrating their farm enterprises by sharing their products and locations with consumers that are searching for ways to reconnect with their food supply and rural communities. Our fairs and festivals are experiencing a renewed interest contradicting national trends as they capitalize on the “staycation” trend. The ingenuity and diversity in the activities you are seeing in agritourism provide an opportunity for consumers to connect with West Virginia in a very personal way. Agritourism is working in the state and providing our farm operators and small communities a real way to add economic revenue.”

Technology connections in agritourism are on the rise. West Virginia agritourism enterprises are using blogs, Facebook pages and Twitter to introduce consumers to their farms and educate them about available crops and special events. The Inwood Farmers Market now informs their technology savvy clients about fresh produce deliveries and special events via entries on their Twitter page. Martinsburg’s Orr’s Farm Market lists their upcoming special events on line including twilight farm tours, upcoming peach and apple dessert contests and a visit from Santa to the farm in December. The 2009 growing season saw the introduction of their on-farm bakery with featured pies and cookies as well as seasonal breads. The farm market season kicked off in mid-May with a celebration of the farms two newest additions, Dixie and Brownie, buffaloes born on the farm and named by market guests in a contest.

In 2007, Hillibilly Daylilies owner Lisa Giles attended a WVDA sponsored agritourism workshop in Morgantown funded in part from a USDA Federal State Market Improvement Program (FSMIP) grant. Her idea to research the effectiveness of growing day lilies in a cold frame combined with an intermittent energy tax credit will reduce your tax bill by $500. In contrast, a $500 tax deduction will reduce your tax bill by anywhere from $50-$175, depending on your income tax rate. Consumers can itemize purchases on their federal income tax form, which will lower the total amount of tax they owe the government. Many tax credits are “refundable,” which means that you can take advantage of them even if you don’t owe any taxes but energy tax credits are not. But these are technically non-refundable which means you can’t get more money back in tax credits than you pay in federal income taxes (check your last year’s tax return to get a sense for how much federal income tax you paid). You can claim the entire credit as long as the total amount of federal income tax that you owe, minus your deductions, is more than the total amount of tax credits that you are claiming. So if a person is in a tax situation that owes no taxes he or she cannot benefit from this program.

As a rule the credits are limited to the 2009 & 2010 tax years and have limit of $1,500 but there are many items included that have a 30% credit and upper dollar limit and the option to carry the credit over several year period. That is why it is important to research this thoroughly before taking a step that you think will be credited for. There are several websites that, with study, will help you better understand how you personally fit into this opportunity. A sound approach to securing more information about energy tax credits especially what does and does not qualify, Google: "federal tax credits for energy efficiency". This search will yield several websites that include government like the Department of Energy and the Internal Revenue Service and private like the Energy Start website. Of course, to sort facts from opinion, it is always safer to check every new fact with a professional before you leap.

1. Must be “placed in service” (i.e., installed) from January 1, 2009 through December 31, 2010
2. Must be for taxpayer’s principal residence, EXCEPT for geothermal heat pumps, solar water heaters, solar panels, and small wind energy systems (where second homes and rentals qualify)
3. $1,500 is the maximum total amount that can be claimed for all products placed in service in 2009 & 2010 for most home improvements, EXCEPT for geothermal heat pumps, solar water heaters, solar panels, fuel cells, and small wind energy systems which are not subject to this cap, and are in effect through 2016
4. Must save your receipts and the Manufacturer Certification Statement for record keeping,
5. Improvements made in 2009 will be claimed on your 2009 taxes (filed by April 15, 2010) — use IRS Tax Form 5695 (2009 version) — it will be available late 2009 or early 2010
6. If you are building a new home the tax credit for geothermal heat pumps, photovoltaic systems, solar water heaters, small wind energy systems and fuel cells, but not the tax credits for windows, doors, insulation, roofs, HVAC, or non-solar water heaters.

The state of West Virginia offers tax incentives, as well, to review that list, Google: “WV Energy efficiency tax incentives “. The state is offering an Energy Star Sales Tax Holiday which eliminates sales tax on Energy Star Appliances from September 1 through November 30, 2009 & 2010. During the three-month Sales Tax Holiday, West Virginians will not have to pay the State’s 6% sales and use tax on certain ENERGY STAR® qualified products.

Purchases qualify for the sales and use tax holiday if the purchase is for a product that:
1. has been designated as an ENERGY STAR® product
2. costs $5,000 or less
3. is for noncommercial home or personal use.

There are some specific guidelines beyond choosing the list of appliances and building materials that must be followed carefully. They and their exceptions include: The item or improvement.

Taking steps to conserve energy is good for the planet and with some study it can also be a good deal.

Make Plans Now!

WV Small Farm Conference

MARCH 2010

Contact Tom McConnell
(304) 293-6131 ext. 4237
Or email TR McConnell@mail.wvu.edu
The Rural Energy for America Program (REAP), Section 9007 of the 2008 Farm Bill, administered by USDA, Rural Development, closed the application window for fiscal 2009 on July 31, 2009. With the assistance of the West Virginia Department of Agriculture and West Virginia University Extension Service numerous informational workshops were held prior to the Notice of Funds announcement. Although the number of applications received was not as high as anticipated, a number of significant accomplishments were realized with this round of funding opportunities.

A portion of the Section 9007 funding was allocated for eligible entities to compete for funding which would allow them to complete energy audits for agricultural producers and rural small businesses. In the past, obtaining these audits, which are necessary for application funding, had been a problem for those individuals and businesses. We are pleased to say that one application is under consideration for funding from West Virginia. Should this application be funded at the National level, access to this service will be more readily available to assist ag producers and small businesses to determine their energy conservation needs and what steps they may take to reduce their energy usage and increase their bottom line.

The Natural Resources Conservation Service has begun cost sharing for energy audits under their EQIP program. Ag producers who have signed up for the program may be eligible for cost sharing of $1500 to pay for the cost of the energy audit for their operation. This program is set to continue during fiscal 2010.

Section 9007, REAP, as funded by the 2008 Farm Bill, is set to increase to $60 million nationwide during Fiscal 2010. Additional increases are mandatory through Fiscal 2012 which will bring the program to $70 million. It is also anticipated that application acceptance will no longer be limited to a designated date. This means that applications may be accepted on a continuous basis beginning sometime after October 1, 2009. With the anticipated increases in energy costs and a greater emphasis on energy conservation, the time to begin the process has arrived.

For additional information you can contact Richard Satterfield, Rural Energy Coordinator at (304) 284-4874 or visit the USDA website at http://www.rurdev.usda.gov.

“USDA is an equal opportunity provider, employer and lender.”

A table depicting beginning and end weight performance of the different weight ranges of cattle turned out. Being a contract grazer Hubert has no control over the size of the cattle he turned out, a grazer turning out cattle on his own will benefit from this knowledge as the purchase price of the cattle is almost always driven by weight. This information will allow the grazer to utilize Livestock Risk Protection for income and smarter buying practices. It is easy to estimate a breakeven price when you know the end weight is near to the average.

A table depicting beginning and end weight and performance is below:

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### Wt Range Avg

| 400 - 500 lbs. | 311.67 |

Grazing

FROM PAGE 9

good records!
The table to the left depicts the performance...
Eating Buckwheat
BY TOM McCONNELL, DIRECTOR, WV SMALL FARM CENTER, WEST VIRGINIA UNIVERSITY

I grew up eating buckwheat cakes. They weren’t an everyday staple for us like they were for so many I grew up around, but I ate lots of cakes with lots of different families. Many of those families, farm or town ate buckwheat cakes for breakfast every morning. Some cooks liked their cakes thick and sweet like a pancake where they would buy a wheat and buckwheat flour mix and prepare a batter for immediate consumption. I soon learned that the really good cakes were prepared by cooks who first prepared a starter consisting of 1 cake of yeast, 1 teaspoon of salt, a quart of water, and enough buckwheat flour to make a stiff batter (no other flour is added). The starter was allowed to sit, at least, over night preferably a couple of days. When the time came to bake cakes, the cook would dissolve 1 teaspoon of sugar and ½ teaspoon of soda in a cup of warm water to add to the starter. One cup of starter was removed to mix with more flour and water to perpetuate the starter. Next more warm water was added to actually prepare the batter. It is important to inject here that in buckwheat country the main attraction is referred to as buckwheat cakes and never, never buckwheat pancakes!

I learned that there was much variation in taste and consistency in cakes from different cooks; explained I assume, by the role environment and taste preference play in this process. Most of the cakes were served very sour which was determined by how well the starter was fed. The starter was often a kept going for many weeks. I think the starter was perpetuated more from economics than from any culinary insight. Many cooks add other ingredients to their batters, for example add-
ing a cup of coffee or more sugar to give them a browner look on the plate. The browning issue is important because the flour is gray and the cakes are gray, too. A researcher friend of mine pointed out as I was talking about the economic opportunity with buckwheat considering the health benefits and he said, “It’s awfully hard to get excited about gray food!” Personally I like to add buttermilk and molasses to the batter. Most cakes are baked on a medium hot, greasy griddle; I learned that I got very tasty results placing a patty of butter on the griddle just before the batter. The edges of the cakes would get brown and featherly. The sour and usually very thin (the thinness was determined by how much water was added to the batter) crepe-like cakes are usually served in a stack of three or four with a couple sausage patties on the side. Often the cakes are covered with heavily peppered sausage gravy. The people who taught me to eat buckwheat cakes, for breakfast added fried eggs over the top. Maple syrup with butter was the topping of choice, usually dribbled over the cakes, gravy, and sausage. It’s hard to explain, but in moderation the cakes always make my stomach feel good. This is likely due to the alkaline nature of the buckwheat flour and also seen in millet. Admittedly, not too scientific, but, the cakes do possess a great satiety factor, not like that derived by fat, but a certain relaxed comfortable good feeling.

We have learned to eat buckwheat as blinis (a Russian crepe) and galettes from Brittany, France. In Brittany, the buckwheat crepe is eaten plain with butter, or like we do cakes topped with savory items such as eggs and meat. Whole hulled seeds (called ‘groats’) are toasted to make a porridge called kasha.

The demand for buckwheat has never been greater and the increase in price is calling a few more growers out each year. Some think that as we learn to adjust to the new energy order, buckwheat will continue its increase in popularity due to its low fertilizer requirements and desirable nutritional attributes. In 1938, as a response to slow recovery from the depression some local businessmen and others thought that perhaps they could spur the local agricultural economy by promoting the farmers and farm life by organizing the Preston County Buckwheat Festival. Buckwheat was seen as a crop unique to the county, but really potatoes would have been a better choice as the acreage of that crop far surpassed that of the star of the festival. This event started out as an end of harvest celebration with games, horse trading, a carnival, and the selection of Queen Ceres and King Buckwheat (she for her grace and beauty and he for the quality of the gallon of buckwheat seed he exhibited - yes, the first king and the queen got married). The festival is still going strong and it continues to hold on to its uniqueness and promise of economic potential as it serves thousands of buckwheat cake and sausage dinners featuring locally grown and ground buckwheat and locally produced hogs for the sausage. The county still has one active grist mill and farmers to supply it. In fact, Preston County buckwheat cakes were served at the West Virginia pavilion at the 1963 World’s Fair. There is something about the crop and its history that have allowed it to always take a backseat to others, but never go away. Maybe

Wanted
FROM PAGE 1

The way food is preserved or processed, obviously will determine its usefulness to us for later consumption. At the WVSCF last year we needed vegetables. Had the conference been held in November we would have had many options with tunnel grown. But by not being prepared, the February date made us work harder. And the menu reflected that challenge. Canning works for some vegetables, freezing, and drying others. The dilemma is no different than we experience at home but adding the layer of the health regulations for public consumption makes this decision harder.

There are many of us learning to dry vegetables. This process requires fewer regulations than other methods and should be less expensive. Again the WVDA must be in the loop. But, had we had some local chicken and made our own broth, we could have used those dried vegetables then added some local noodles and prepared another meal for the WV Small Farm Conference Small grains (except for the wheat flour) and beans were scarce at our conference. Cooked beans or small grains would liven up a meal in cold February. But we can’t eat them if we don’t have them. The margins derived from raising these crops are not as wide as from some fresh crops but they allow 12 month marketing opportunity.

Freezing some foods appears to be a worthwhile project. The WVDA will need to be contacted for guidance there too. As Teresa lists in her article there is a process and there are approved kitchen requirements associated with freezing.

Presently we are in the planning stage of supplying a few conferences to source locally produced food. They include two-day Income Tax conferences (November in Charleston & Morgantown) and the WVU Extension Annual Conferences for November and the WV Small Farm Conference in March. If you are interested in supplying some of your production for our conferences, or some local ones; please contact Tom McConnell at the WVU Extension Service WV Small Farm Center. TRMeCon nell@Mail.wvu.edu or 304-293-6131. A very strong component of the message delivered at the WV Small Farm Conference (Scheduled for the first week of March in 2010) is the food. So this local food message is intended to encourage you to experiment with us, as we develop another local food pathway for WV farmers.

Buckwheat Campagne,Note: each proportion is based on weight, not volume.
Flour 93%
Buckwheat flour 7%
Water 75%
Salt 3%
L.L. 20%
Short mix dough and ferment for 3 hours 15 minutes with three folds. Divide into at least 500g loaves and final proof for about 1.5-2 hours. Bake at 450F.

My son Mac suggests that buckwheat is an excellent flour to add to wheat flour for baking bread products. His comments follow. Getting buckwheat into bread is easy, though in small percentages due to the lack of gluten and the speckled gray color it provides. A bread baking reference entitled, “Advanced Bread and Pastry” offers a firm of bread that includes buckwheat in a polish (A polishing is a sponge starter has the consistency of a thick liquid-al of bread) at –8% (strictly by weight not volume) of the total flour. I’ve substituted buckwheat for rye (~5% of the flour in formula) in a campagne (French country-style bread) and had excellent results. A friend of mine replaced 5% of the flour in a traditional croissant formula. Buckwheat imparts a unique flavor that could be overwhelming for some, so a rule of thumb would be to avoid making buckwheat over 10% of the flour in a formula. Buckwheat seeds have about twice the oil as other seeds, so the flour should be stored in the freezer to maximize its shelf life.
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<td>Mineral</td>
<td>304-788-3621</td>
<td>Stacey Hamrick</td>
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<td>Monongalia</td>
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<td>304-234-3673</td>
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<td>304-358-2286</td>
<td>Dave Seymour</td>
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<td>Greg Hamons</td>
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<td>Preston</td>
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<td>Carrie Stemple See</td>
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<td>Putnam</td>
<td>304-586-0217</td>
<td>Chuck Talbott</td>
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<td>Raleigh</td>
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<td>David Richmond</td>
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<td>Randolph</td>
<td>304-636-2455</td>
<td>Ronnie Helmondollar</td>
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<td>Ritchie</td>
<td>304-643-2164</td>
<td>Alex Straight</td>
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<td>Roane</td>
<td>304-927-0975</td>
<td>Brandy Brabham</td>
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<td>Summers</td>
<td>304-466-7113</td>
<td>David Richmond</td>
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<td>Taylor</td>
<td>304-265-3303</td>
<td>John Murray</td>
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<td>Tucker</td>
<td>304-478-2949</td>
<td>Georgette Plaughar</td>
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<tr>
<td>Tyler</td>
<td>304-758-2101</td>
<td>Kelly Dagesse</td>
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<td>304-473-4208</td>
<td>Gary Rappking</td>
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<td>Wayne</td>
<td>304-272-6839</td>
<td>Carl Marcum</td>
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<td>Webster</td>
<td>304-847-2727</td>
<td>Mike Hall</td>
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<td>Wetzel</td>
<td>304-455-0934</td>
<td>Mindy Mall</td>
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<td>Wirt</td>
<td>304-275-3101</td>
<td>Patty Morrison</td>
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<tr>
<td>Wood</td>
<td>304-424-1960</td>
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<tr>
<td>Wyoming</td>
<td>304-732-8000</td>
<td>Susan England-Lord</td>
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**Important Websites**

- West Virginia University Website
  - [www.wvu.edu](http://www.wvu.edu)

- West Virginia University Extension Website
  - [www.wvextension.com](http://www.wvextension.com)

- West Virginia Soil Conservation Agency
  - [www.wvca.us](http://www.wvca.us)

- West Virginia Department of Agriculture
  - [www.wvagriculture.org](http://www.wvagriculture.org)

- Farm Service Agency
  - [www.fsa.usda.gov](http://www.fsa.usda.gov)

**United States Department of Agriculture, Natural Resources Conservation Agency**
- [www.nrcs.usda.gov](http://www.nrcs.usda.gov)

This publication was developed by the WVU Extension WV Small Farm Center Team in cooperation with the *Times West Virginian*

**Tom McConnell**
Director-WV Small Farm Center

**Extension WV Small Farm Center Team**
- Kellen McNutt
- Travis Cullen
- Kate Peters–edit chief

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- Petersburg Watershed Office 304-257-1595
- Ripley Watershed Office 304-372-8164
- Parkersburg Watershed Office 304-422-9084
- Potomac Water Quality Office 304-538-7581

**Soil Conservation District Office**
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- Eastern Panhandle 304-263-4376
- Elk 304-264-5101
- Greenbrier 304-645-6173
- Guyan 304-528-5718
- Little Kanawha 304-422-9088
- Monongahela 304-296-0081
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- Potomac Valley 304-822-5174
- Southern 304-253-0261
- Southern (Hinton Office) 304-466-2033
- Tygart 304-457-3026
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