



# The Green Machine

Dedicated to improving the quality of life for future generations through education.

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**SOLUTIONS**  
for *your* LIFE

## Bradford Farmer's Market Thrives Since Opening

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University of Florida Marketing Extension Agent Linda Landrum, Bradford County Commissioner Doyle Thomas and Bradford County Extension Agent Jim DeValerio help Market Managers Sandra (Sam) Williams and Marilyn Dye cut the ribbon at the Bradford Farmers Market grand opening on January 5th, 2008. The market is supported by several county and city community leaders and satisfied connoisseurs of fresh market produce. **Unfortunately**, not all of them are in the picture!

Since opening, the market has consistently offered fresh and friendly locally grown products, satisfying local consumers. **But wait! It get's better!** The market is good for those who sell produce too! Several factors like government support, terrific market managers and technical expertise from the University of Florida/IFAS Extension Small Farms program have aligned to help this effort be successful. The time to get involved and join the effort to strengthen our agricultural economy is **now**.

**More good news.** On February 12th, a new working group was created, made up of farmers and UF/IFAS Extension in NE Florida. The group will have monthly workshops that will provide farmers with information on topics such as pest scouting & management, water & nutrient management and seed germination, and pecan production.

See Page 3 for future workshops.



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**We are in a drought and facing possible water shortages.** How can that be? We have water standing in ditches and even mosquitoes buzzing around! How can we be in a drought? It is true that we have had a pretty fair amount of rain recently that has replenished our surface waters but not our water supply. The rain that falls here does not trickle down to the aquifer which is our very important natural underground water storage tank. This is because most of Bradford County has what is called a "hardpan" underneath the soil surface. When we get a lot of rain the hardpan causes water to runoff to the lowest spot instead of seeping down into the ground. This occurrence is demonstrated by the way Sampson Lake has filled up so quickly after just a few rainfall events.

This is not just our problem. It is a problem throughout our water management district which is why on January 8, 2008, **the Suwannee River Water Management District Governing Board issued the agency's first-ever Phase II Water Shortage Order, which includes mandatory water-use restrictions that will become effective on April 7, 2008.**

**The order includes restrictions, and some exemptions, for all water-use categories including residential, commercial, industrial, and agricultural.**

**The unprecedented action was taken in response to extremely low groundwater levels experienced throughout the 15-county region during the current drought, coupled with predictions that the drought will intensify over the next several months.**

**As stated above, all of us are going to have to change our behavior in order to preserve our water. Here are a couple of examples of how you will be affected:**

Farmers using low pressure/low volume irrigation systems will have less restrictions than farmers using overhead irrigation, as will farmers who use approved Best Management Practices.

Homeowners with established lawns will be restricted to watering lawns between 9 pm and 7 am on odd or even numbered days depending on whether your address number is odd or even.

Water for cooling and air-conditioning will be restricted to the amount of water needed to maintain the temperature to 78 degrees. Water used for aesthetic purposes (fountains, etc. ) are prohibited.

There are five pages of specific restrictions that cover all water use categories identified by the water management district. They include agriculture, livestock, golf courses, established landscapes, new landscapes, commercial, industrial and cemeteries. Visit your extension office to get all details pertaining to water use rules, conserving water around the home or how to plan low water landscapes. Or you can visit the Suwannee River Water Management District web page. Follow the link listed below and look for the "Water Shortage Order in Effect, what you need to know" link.

<http://www.srwmd.state.fl.us/>

It is my sincere hope that we will get the rain we used to get in the past. Historically, we never had to worry about how much water we use. In fact, we had so much we had to drain the land to get the water out of the way. But the situation is different now and water is too important not to take measures to conserve it when the storage supply is running low. Think of water as a type of cash reserve. Literally, it is money in the ground. Unlike money, there is no bank to go to borrow water from! Our wasteful use of water is ingrained in us because we have, until recently, always had consistent rainfall. Now we have had consistently low rainfall for the past 10 years. Don't be fooled by the recent rains, we need a lot more rain to recharge our tanks!

Really cool websites from the University of Florida to read regarding water use and conservation:

<http://waterconservation.ifas.ufl.edu/>

<http://news.ufl.edu/2001/03/22/drought/>

[http://livinggreen.ifas.ufl.edu/water/water\\_conservation.html](http://livinggreen.ifas.ufl.edu/water/water_conservation.html)



There is a lot happening in Bradford County on the Small Farm front. In today's climate of stagnant economic times it is really great to see an active market evolve within our community. It is better to take the initiative to build a small business than to wait on the government to fix things for you.

There are many farms in Bradford County ,including ones that specialize in certain crops and others that produce a variety of seasonal crops to sell either locally or outside the county. We also have one farm, D & K Aquaponics that specializes in growing tomatoes and cucumbers (among other things) hydroponically on fish effluent nutrient solution.

We have two new demonstration farms in the county. These farms, like many new farms, have less than an acre of land being cultivated. These sights were chosen as demonstration farms in order to show farmers that intensively managed small gardens for specialty markets can adapt large scale commercial farming techniques to improve their productivity.

The first is owned by Robert and Ineater Franklin of Lawtey. It should be no surprise that **water management** is one of the key topics being addressed on these farms. The Franklins have farmed the same land many years. Up until last year Mr. Franklin was able to produce his strawberries using only overhead irrigation. But last year's drought was so severe the overhead irrigation just could not reach the strawberry roots and his crop yield was very low. The local Extension Office along with Bob Hochmuth (UF/IFAS Multicounty Vegetable Production Agent) and Mace Bauer (UF/IFAS Best Management Practices specialist) have helped the Franklins install a drip irrigation system that will put the **water** where the plants can use it. We also installed an injection system so the strawberry plants can be fed just the amount of **water** & fertilizer they need when they need it.

The second farm is Cognito Farm, owned by Sam and Jerry Williams, located just north of Starke. The owners of the Cognito Farm choose to farm using natural forms of nutrient sources like composts and manures. They do a good job of **enhancing the soils ability to hold moisture and nutrients by adding organic matter in their garden soil**. These natural forms of fertilizer are slow release forms of nutrients so they don't have to fertilize (side dress) after the crop is established. Using overhead irrigation loses **water** to evaporation, so Sam & Jerry have chosen to use only drip irrigation in order to conserve **water**. Another benefit of using drip irrigation is that there is less chance for plant disease since the foliage is not wet all the time. This is important since they don't use pesticides on their produce.

**Farmers using approved Best Management Practices (low pressure/low volume irrigation, fertilizer management and integrated pest management systems) have less restrictions on water use then farmers who do not use these sustainable farming practices.**

**If you want in depth information on **water** and fertilizer management using drip irrigation call your local Extension Office or visit these websites:**

<http://edis.ifas.ufl.edu/HS172>

<http://edis.ifas.ufl.edu/HS156>

[http://www.florida-agriculture.com/news/agen\\_gwinnbrothers.htm](http://www.florida-agriculture.com/news/agen_gwinnbrothers.htm)

### **Small Farms Workshop Announcements**

**March 25: Learn how to scout for insects and pests in a walking tour of Haley West's organic vegetable farm in Worthington Springs from 5:30 until dark.**

You will have the opportunity to visit the Franklin and Cognito Farms on May 6th, 2008 to learn about water and nutrient management for niche market producers. The farm tours will start at the Franklin's Farm and end up at Cognito Farm. There will be an informal introduction, question/answer meeting beginning at 5:00 pm at the Franklin Farm followed by an onsite demonstration. Then we will go on to tour the Cognito Farm. We will wrap up at sunset.

**Call your extension office to sign up for a workshop.**

# Master Gardeners Teaching about Water Conserving Landscapes

This year Bradford County's Master Gardeners are learning to teach homeowners how to establish attractive landscapes and conserve **water** at the same time. Your landscaping decisions should begin with a soil test and an assessment of the light conditions in your yard. Choosing plants that are naturally suited to the soil on your land will save you time and money by reducing the amount of water, fertilizer and pesticides needed to maintain your landscape.

There are three characteristics of your yard that need to be determined; soil pH, soil texture and the sunlight patterns. Soil pH measures whether your soil is acidic (pH 3 to 5), neutral (pH 5.5 to 7.6) or a limey soil (above 7.6). Soil pH controls which minerals are available to the plant. Some plants will tolerate a wide range of pH while other plants thrive in a soil with a narrow pH range.

Soil texture refers to the particles that make up the soil. Clay is made of very small particles that hold tightly to water. Sandy soils drain water fast because the particles are large and have a lot of space between them.

Just as with pH, plants have different light requirements too. Some plants like full sun and some tolerate full or partial shade.

Identifying these characteristics and then selecting plants that match them will set the stage for a hearty and healthy landscape that will thrive with a minimum of extra work. If you have sandy soil and you pick drought tolerant plants, you'll save **water**.

This type of landscaping has been used for a long time. In the past, there were no sprinklers, pesticides or commercial fertilizers, so landscapes were naturally comprised of native plants adapted to the area. We are all familiar with landscapes of azaleas, pine trees, wire grass and palmettos on our acidic, flat woods soils.

Modern terms for these naturally adapted landscapes are "Florida Friendly" or "Xeriscaping". Indeed, these terms are not new. What is new is the contribution of science to measure soil attributes and to categorize plants by their growth requirements. You don't have to be a pioneer to be able to have a xeriscap, just get some information and do a little reading.

**Should you have a sprinkler system?** Good question and one that deserves some thought. Ideally your landscape would only need irrigation when you are watering in new plants. This is possible but there are some landscape features, like a healthy lawn, that require irrigation in order to thrive. The Extension Office will soon have a portable sprinkler demonstration complete with various spray heads (rotator, fan, bubbler and drip), time clocks, solenoids and moisture sensors that will be used to teach homeowners and professionals how to install and maintain an irrigation system.

Some good web pages for more information from the University of Florida, Institute of Food and Agricultural Sciences:

<http://edis.ifas.ufl.edu/MG027>

<http://waterconservation.ifas.ufl.edu/>

[http://livinggreen.ifas.ufl.edu/water/water\\_conservation.html](http://livinggreen.ifas.ufl.edu/water/water_conservation.html)

## Learning Opportunities and Workshops for Home Irrigation

<b>Home Irrigation System Tips</b>	<b>Bradford Farmers Market</b>	<b>March 15,2008, 8 until Noon</b>
<b>Home Irrigation Systems</b>	<b>Bradford County Extension Office</b>	<b>March 27, 2008, 6 to 8 pm</b>
<b>Maintaining Your Sprinkler System</b>	<b>Bradford County Fair</b>	<b>April 11 to 19, 2008</b>



The trivia items below were gathered from various public-domain sources and may not all reflect the most current statistics.

Water is the only substance found on earth naturally in three forms- solid, liquid, and gas.

Water is an insulator. It regulate the earth's temperature.

A person live approximately one week without water, depending upon conditions.  
(a person can live more than a month without food)

There is approximately one million miles of pipeline and aqueducts in the U.S. and Canada (enough to circle the earth 40 times)

The first water pipes in the U.S. were made from fire charred bored logs.

17,000,000 households use private wells for their water supply .

1.6 - 7 gallons of water is used to flush a toilet.

The average 5-minute shower uses 12.5 - 50 gallons of water.

There are 58,900 community public water supply systems in the U.S.

These systems process 34 billion gallons of water daily .

The average residence uses 107,000 gallons (National) during one year.

An individual uses 123 gallons (National) daily.

On a daily basis a person pays 25 cents for water (National average) .

80% of the earth's surface is water.

Of all the earth's water, 97% is oceans or seas .

2% of the earth's water is frozen and therefore unusable.

Only 1% of the earth's water is suitable for drinking .

It is possible to drink water that was part of the dinosaur era.

If all community water systems had to be replaced, the cost would be in excess of \$175 billion.

It costs over \$3.5 billion annually to operate the water systems throughout the country .

Americans use 5,506,540 gallons of water each day for showers.

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Leaks can be costly. A leak of only one drop per second wastes about 10,000 liters of water per year.

More than 50% of water applied to lawns is lost to evaporation or run-off due to overwatering.

One gram of PCBs can make up to one billion liters of water unsuitable for freshwater aquatic life.

An automatic dishwasher uses 9 - 12 gallons of water to wash dishes, on the average.

One drop of oil can render up to 25 liters of water unfit for drinking.

2,072 gallons of water is used to make four new tires.

Twenty gallons of water, on the average, is used to hand wash dishes.

One gallon of water weighs 8.34 pounds.

It would take 219 million gallons of water to cover one square mile with one foot of water.

There are 7.48 gallons of water in one cubic foot.

When it rains one inch, you get 27,000 gallons of water per acre.

66% of the human body is water.

It takes approximately one gallon to process a quarter pound hamburger.

It takes 2,072 gallons to make four new tires.

It takes 1,500 gallons of water to process one barrel of beer.

It takes 9.3 gallons of water to process one can of fruit or vegetables.

It takes 101 gallons of water to make one pound of wool or cotton.

It takes 1,851 gallons of water to refine one barrel of crude oil.

It takes 62,600 gallons of water to produce one ton of steel.

It takes 28,100 gallons of water to process one ton of cane sugar to make processed sugar.

Using recycled water (treated to almost drinkable standards) on landscaping would save the U.S. enough fresh water in a year for everyone in New York City to take a 10-minute shower every day for 4 1/2 years.

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