I hope everyone has their spring garden in the ground and wildlife plots planted for an abundant spring harvest. It’s expected to be drier than normal this year so let’s keep our fingers crossed that we continue to receive the coastal showers that have kept our sub-soil moisture at adequate levels during the last month.

I have received several calls within the last couple of months regarding fish ponds so I have included some tips for managing the fish pond during the summer in this newsletter as well as what to expect this year based on the current climate forecast from the Southeast Climate Consortium.

Additionally, I wanted to give you a quick update on the state of Agriculture in Jacksonville. The following are Duval County highlights from the 2007 census of agriculture.

- The number of farms has decreased by 11. From 382 in 2002 to 371 in 2007.
- The amount of acres in farming has decreased by 4467. From 31,241 in 2002 to 26,774 in 2007.

Farms by Size:

- 1 to 9 acres..................124
- 10 to 49 acres............170
- 50 to 179 acres.........41
- Above 180..................36

Head of livestock:

- 8,528 cattle
- 108 hogs and pigs
- 894 horses
- 1,206 goats and sheep

For more information visit: [http://www.agcensus.usda.gov/](http://www.agcensus.usda.gov/)

The Florida Department of Agriculture and Consumer Services, in cooperation with the Florida Cattlemen’s Association, and the University of Florida-IFAS, have scheduled a number of kickoff meetings to formally introduce the recently adopted Cow-Calf Best Management Practices (BMP) manual. This will be the official launch of the industry’s BMP program at the Baker County Extension Office in Macclenny on Tuesday, June 23 at 6:30 pm.

The meeting will provide producers with key information on the use of the manual, enrollment process, soil testing, and forage production as it relates to water quality protection. This is a very important program, given the vast number of acres of rangeland in Florida. Producers are encouraged to make every effort to attend the regional meeting.

Managing Fish Ponds During the Summer
Brad Burbaugh, Duval County

We start to hear of fish kills in many ponds this time of year. In virtually every case, it has been possible to link these fish kills to recent hot, dry weather conditions and/or algal blooms.

Symptoms of these incidents include large numbers of affected fish across all species, fish gulping at the water surface, and snails leaving the water and gathering around the pond edge. The oxygen level in ponds is lowest during the early morning hours. So if you see fish piping at the surface in the morning they are giving you a warning sign.

If you do not have an oxygen meter or aeration you can use the following observations & conditions can be used to anticipate oxygen depletion:
- Fish suddenly stop feeding.
- There is a rapid change in water color to brown, black or gray, signifying loss of an algal bloom.
- A putrid odor arises from the water.
- There has been an extended period of hot cloudy weather.
- There is a heavy summer wind and a rainstorm.

Unfortunately, there is little that can be done quickly to prevent these fish kills. They can be prevented by treating or reducing algal growth in the pond earlier in the summer using herbicides, dyes techniques. Adding herbicides or chemicals in the summer will make the problem worse.

My recommendation is to buy an aeration device to increase dissolved oxygen in the pond during blooms. These can be as elaborate as water fountains and as simple as a garden hose sprayed into the water. Proper use of the timer should have the aerator turn on during the late evening (10 p.m. to midnight) and turn off after daylight (7-8 a.m.).

Here are few more pointers for managing the ponds during the summer. Do NOT stock fish in summer months. High water temperatures and low dissolved oxygen weaken fish. Also, sudden changes in in water temperature cause fish to go into shock and die.

- Do not feed fish in very hot weather. When the water temperature is 95 degrees or above the fish will quit eating all together. And never feed more than what the fish will eat. If you leave excess feed in the pond it breaks down and reduces the amount of dissolved oxygen available for the fish.
- Lastly, do not feed the fish unless you are harvesting them. Most of the bream ponds I see are under fished and an overcrowded pond increases the chance of stress and disease.
La Niña is Back!
Brad Burbaugh, Duval County

As I read the climate forecast from the Southeast Climate Consortium a few points caught my attention and I thought it would be helpful to summarize some important points for agricultural producers. It seems that La Niña conditions have abruptly returned to the Pacific Ocean. La Niña can be thought of as the opposite of El Niño and usually bring a warmer and drier spring season to Florida. La Niña events in 1999 and 2000 and more recently in early 2006, were associated with an increase in forest fires across Florida and Georgia. La Niña is also known to be associated with an active tropical hurricane season. For more information refer to the last climate outlook available at http://agroclimate.org/forecasts/current_climate_outlook.php

Below is a quick review of the potential effects of La Niña on our agricultural industry.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Potential La Niña Impact</th>
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<tbody>
<tr>
<td>Pepper &amp; Tomato</td>
<td>Tomato and green peppers generally yield more during La Niña years than during Neutral or El Niño years. Dry weather generally decreases fungal and bacterial diseases and help growers reduce the number of fungicide applications, however viruses caused by thrips like Tomato Spotted Wilt and Tomato Yellow Leaf Curl are problems.</td>
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<tr>
<td>Forestry</td>
<td>Warm and dry conditions associated with La Niña events may prompt managers to consider re-scheduling planting of drought vulnerable seedlings, reinforce existing control efforts of southern pine beetle, and delay the harvest of pine straw to retain soil moisture. La Niña also brings the potential for a very active wildfire season. Average acreage burned during La Niña years is often more than doubled as seen in 1998 and 2001.</td>
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<tr>
<td>Pasture</td>
<td>If La Niña conditions persist in the spring, producers should take an inventory of their current stocks of hay or other conserved forage and develop a plan for stretching this stored forage. This may mean that producers will need to hold back some amount of the hay on hand in case the expected drought conditions become severe and sustained. Dry weather in the spring will cause annual ryegrass growth to become more mature and less digestible much earlier than when spring rainfall was abundant. Further, total yields from ryegrass may be 30-40% less than normal under these conditions, as this important spring pasture species tends to quit growing in early to mid-April when subjected to drought stress.</td>
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<tr>
<td>Row Crops</td>
<td>Warm and dry conditions in a La Niña spring may provide the perfect environment for fall armyworm infestation in corn and increased thrips population in vegetables. Yellow mustard and wild pansy are ideal hosts for thrips, and a warm winter may provide ideal growing conditions for these and many other host plants.</td>
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<tr>
<td>Fruits</td>
<td>The dry weather during La Niña years is usually not conducive to fungal diseases such as Anthracnose and Botrytis fruit rots. Disease inoculum for Botrytis and anthracnose has been low this season since no major disease events have occurred up to now. With the return of La Niña and expected drier conditions, regular applications of fungicides may not be needed as often to suppress these diseases especially when moderately or highly resistant cultivars. So this may be a good opportunity for growers to extend spray intervals and reduce fungicide costs without a great risk of compromising their profits.</td>
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These more advanced climate forecast tools can help you prepare for the next season by essentially giving you a “heads-up” on what to expect. By using these tools producers can be better prepared to remain sustainable and profitable.
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