Dear Producers,

I know that many of you were beginning to get worried about hay fields and pasture forages for your cows, but finally we have received some rain!!

In this newsletter you will find information about spray nozzle selection, The upcoming Hay Field Day, and information about the 4-h Fishing camp that was held this month. Information regarding the North Florida Research and Education Center is also included. Specialists there include Linda Landrum for marketing and Bob Hochmuth for vegetable crop information. They are available for help when they are needed.

Sincerely,

Wendy Burton
Livestock & Natural Resources

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Selecting the Right Spray Nozzle

Pesticide application is one of the most important aspects in any type of agricultural practice. It is extremely costly, and if done incorrectly can cost you tons of money in re-application or can cause a total loss of production. Legal issues can also arise if chemical drift occurred as a result of your application. Selecting the correct spray nozzle and understanding the spray pattern is one step towards correct application.

There are dozens of different nozzles available in hundreds of different sizes, made out of different materials, and of varying capacities. Each nozzle is designed to yield specific performance based on what you are spraying, when you’re spraying it, and how you’re spraying. Even though these nozzles are of relative low cost, they can have a huge impact in the success of your product. A poor choice in nozzle type, use, or pressure can lead to re-application or reduced performance. There are a few questions you must ask yourself before you purchase nozzles and use them.

1. **What are you spraying?** A herbicide, insecticide, or a fungicide. Or is it a Soil incorporated, pre-emergence, or post-emergence. Contact or systemic for post-emergence?

2. **How are you spraying?** Broadcast, banded, directed, or mechanical air assisted?

3. **What is your tolerance to drift?** Will you be applying near a residential area? Are there adjacent crops to think about? Have you had complaints in the past?

4. **What is the pressure range of the sprayer?** Operating the nozzle in the middle of the pressure range recommended, will give the best performance. This allows for more flexibility in adjustments in speed or changes in the terrain. Using lower pressure than recommended will result in a poor spray pattern.

5. **What is the nozzle spacing on the boom?** Many facts dictate the correct nozzle size you need. The desired application rate, ground speed, and nozzle spacing are just a few. Each nozzle type and spray angle will have manufacturer recommendations for proper spray heights and nozzle spacing. You may also consult the chemical label for further information.

6. **What is the boom height?** Lower boom heights reduce drift and improve coverage, as long as proper overlap of nozzles is achieved.

7. **Which nozzle material is best?** Material selection is based on what you are spraying and how long you expect it to last. It may be of an advantage to spend a little more money for longer lasting nozzles. It is important that you do not mix spray nozzle types or materials as this will change the patterns, wear life, etc. Determining the type of material is important and some guidelines follow:
   - Ceramic will last the longest and provide a constant rate over a longer period of use.
   - Brass materials wear quickly.
   - Plastic material with stainless steel or ceramic inserts cost less than all stainless and will last longer than brass.
   - Stainless steel will last longer than brass.
   - All plastic material can be more fragile and damage more easily than other materials.
   - Plastic has a wear life of two to three times longer than brass, and some have a life of four to six times longer depending upon design.
   - Stainless steel lasts four to six times longer than brass.
   - Ceramic lasts 20-25 times longer than brass.

Spray patterns, nozzle types and selecting the correct nozzle for your operation are all important aspects to consider before applying product. Other places where you can find information concerning nozzle selection and performance are pesticide labels and nozzle information sheets. Many chemical labels have information on gallons per acre or liters per hectare and nozzle spacing. So before purchasing nozzles ask yourself these eight questions and do a little research on which type of nozzle and which spray pattern would work best for your operation.
The UF/IFAS North Florida Research and Education Center – Suwannee Valley (NFREC-SV) is a resource for northeast Florida. If you have not been to the NFREC-SV between Live Oak and White Springs on County Road 136, you may want to schedule a trip or attend one of the many educational events held at the Center. The Center is located in the heart of the Suwannee Valley serving most of northeast Florida. The farm property, now known as the Center, was purchased by the University of Florida in 1953. The 300 acre farm was once a thriving gladiolas bulb farm prior to the 1950s. Today the focus of the research and demonstration activities includes:

- alternative enterprises & organics
- greenhouse hydroponics
- water and nutrient management (BMPs)
- forestry stewardship
- marketing and rural community development
- sustaining small farms
- hay and forage crops

The NFREC-SV is the host location for many field days, workshops, and tours during the year. Most educational programs are provided for commercial farms, both full-time and part-time, but also include Master Gardeners throughout northeast Florida. Field days feature current research on many agricultural topics, often offered at the peak of a specific cropping season. Events in the past year include:

- Spring Suwannee Valley Twilight Fruits & Vegetable Field Days
- Finding a Niche Market
- Advanced Master Gardener Training
- Hydroponics Open House
- Fall Alternative Enterprises Workshops
- Overhead and Drip Irrigation Schools
- On-Farm Pond Management
- Hay and Forages Field Day
- Forest Stewardship Tours

These events are planned and delivered as a team effort of County Extension Agents throughout the region in conjunction with faculty and staff at the Center. Look out for the upcoming events calendar through your local extension office for the next opportunity to learn by “seeing” and “doing” at the NFREC-SV (http://nfrec-sv.ifas.ufl.edu).

NFREC-SV Faculty

Linda Landrum
Regional Specialized Extension Agent
Marketing and Rural Development

Linda is a Regional Specialized agent at the Center, with an educational focus in the areas of marketing, alternative crops, and community resource development. Some of the projects currently in progress are teaching producers how to locate additional markets, introduce the idea of woody cut branches for the florist trade, developing a cadre of producers who will sell at local community farmers’ markets, increasing the number of farms who are engaged in agritourism, and updating crop budgets. Previously Linda was an extension agent in Volusia County. Some of the commodities she has worked with are nursery crops, citrus, cut foliage and flowers, turf, deciduous fruits, and vegetables.

Bob Hochmuth
Multi County Extension Agent - Vegetable Crops and UF/IFAS Statewide Coordinator for Small Farms

Bob has been housed at the Center for over 15 years and coordinates programs in the areas of small farms, alternative crops, and commercial vegetables. Successful programs in the region have included the adoption of plastic mulch and drip irrigation on many North Florida vegetable farms, growing crops using greenhouse hydroponic systems, and managing water and nutrients effectively. Bob provided the leadership for a team of several faculty members from UF/IFAS and Florida A&M University to develop a web site for Florida Small Farmers (http://smallfarms.ifas.ufl.edu) now receiving over 70,000 hits monthly.

Bob and Linda are available through help with your county agent to help you on your farm with these types of needs. If you are interested, please contact me at 904-966-6224 and we can set up a time to meet with one or both of them.

9th Regional Hay Field Day
July 19, 2006
North Florida Research and Education Center– Live Oak

- Registration begins at 8:30 a.m.
- Registration fee is $5
- Sessions will begin at 9:20am and will conclude at 11:45am followed by a Herbicide Update by Dr. Jay Ferrell and lunch. Field demos will being at 1pm and conclude at 3pm.
- Session Topics
  - Freeze tolerance of Bahiagrass
  - Stacking and storing Hay
  - Summer annual legume varieties
  - Mole cricket control
  - Spraying fields– considerations
  - Herbicide and weed control update

Contact your local extension agent to register!

See attached brochure!
Beef Cattle Management Calendar

July Monthly Management

- Make second cutting of hay 4 to 6 weeks after first cutting.
- Check pastures for armyworms and mole crickets and treat, if necessary.
- Mow or spray pastures with herbicides to control weeds and brush.
- Check mineral feeders.
- Check dust bags and back rubs, and/or spray, if needed.
- Repair handling facilities for working the cow herd and weaning calves. Make sure it includes a headgate. If you don’t have any facilities, contract your local extension office for simple corral plan.

August Monthly Management

- Soil test fields for winter pastures and apply dolomite, if necessary.
- Harvest bahiagrass seed.
- Check pastures and hay fields, for armyworms, spittlebugs, and mole crickets, and treat if necessary.
- Be prepared to supplement the herd. If pastures dry up. If it looks like pastures will run out in late summer, get ready to provide emergency feed such as leasing a neighbor’s idle pasture, providing hay, or planting a summer annual like millet.
- Start supplemental feeding before pastures are gone, so as to extend grazing as long as possible.
- Check mineral feeders.
- Check dust bags and back rubs, and/or spray, if needed.
- Watch for evidence of abortion and check for pregnancy.
- Observe animals regularly for signs of diseases.
- Update market information and marketing plans.
- Repair handling facilities and working cattle.
- Check and treat for grubs.
4-H Fishing Camp
On July 5-7, 15 youth attended the 4-H Fishing Camp. We had a biologist with FWC come on the first day and talk to the youth about fish habitats, growth, and identification. He brought a tank full of different species of fish that all youth could hold and learn to identify. We fished that afternoon and had a great time. On Thursday the youth learned how to tie new fishing knots, how water temperature affects fish health, what needs to be in your tackle box, and safety precautions when fishing. They then participated in a pop-can casting competition. On Friday, Cooter Bob invited us out for some fishing and lunch. The youth caught bass and brim and took them home for dinner. But the rain ran us inside where the youth made fish print t-shirts by putting a small amount of paint on the fish and using it as a stamp. We then finished off the week with a little more fishing after lunch.

I would like to thank Terry’s Huntin’ and Fishin’ for donating items for all the youth’s tackle boxes they received at camp. We really appreciate your support!!

I would also like to thank Cooter Bob’s BBQ for allowing us to come out and fish and for supplying lunch to all youth and volunteers!! Lunch was wonderful! Thanks!

And thanks to all of the volunteers for helping throughout the week. Thanks for bringing juice, goodies, and for helping untie everyone as they got their lines crossed in the pond!! Your help does not go unnoticed!!

This newsletter is printed bi-monthly. If you know of anyone not receiving this, that would like to, please call 904-966-6224 and let me know.

Also, check out our website at:
http://bradford.ifas.ufl.edu
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