Under Fire: Fire Ant Management for Pastures and Hayfields
Adapted from Fire Ant Management in Pastures by S. Barbara, NCSU Extension Entomologist
By Lynn Stillwell Sampson County Livestock Agent Swine and Waste Management

Fire ants are a major problem in NC and other southern states. We’ve all seen there mounds or worse not seen them and been stung. Fire ants are found throughout southeast NC and are quickly spreading westward. Sampson and Duplin Counties along with 49 other counties are under quarantine and movement of hay outside of the “red counties” is regulated by the NC Department of Agriculture and Consumer Services and requires a permit.

Fire ants prefer open land and sunlight, which they readily obtain in our pastures and hayfields. The presence of fire ants can have major impacts on livestock operations through animal injury, equipment damage, lower yields in hay production, reduced feeding and many other ways. Unfortunately there is not easy solution to managing fire ants in your hayfield, it really all depends on the number of mounds and their locations.

Very few of the many fire ant pesticides are labeled for use in pastures and hayfields. There are no effective sprays for control of fire ants in pastures. There are some chemicals for treating mounds, and some baits that contain insect growth regulators (IGRs) that may be used in pastures. For a complete list of baits and mound drenches available...
consult the Ag Chemical Manual or contact your County Extension Agent.

The best time of year to treat for fire ants in mid-spring and fall, or in the morning when air temperatures are around 70 degrees F. Do not apply baits and drenches at the same time as ants will not forage and accept the bait while disrupted by the poison from a mound drench. To determine if a mound is active place a few potato chips or some other snack, if ants are noticed within 30 minutes then the colonies are active. For more information on fire ants and control contact your county Extension office.

<table>
<thead>
<tr>
<th>Direct mound drenches</th>
<th>Broadcast bait treatments</th>
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<td>have advantages and disadvantages to balance.</td>
<td>also have advantages and disadvantages.</td>
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<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tr>
<td>Fast acting</td>
<td>More expensive for large areas</td>
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<tr>
<td>Insecticides applied only to targeted mounds</td>
<td>More labor intensive</td>
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<tr>
<td>Advantages</td>
<td>Disadvantages</td>
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<tr>
<td>Quick and easy application</td>
<td>Slower than liquids (too slow for situations where stings are a major concern)</td>
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<tr>
<td>Less hazardous, generally</td>
<td>May harm some helpful non-target ants</td>
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<tr>
<td>Least expensive method for large areas</td>
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<td>Less labor required</td>
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Updated publication for calibrations of stationary and traveling systems
Amanda Hatcher- Livestock Agent
Duplin County, Publication courtesy of NCSU, AG-553-09

North Carolina State University has released an updated version of “Calibration and Uniformity Assessment for Animal Wastewater Application Equipment” to give updated information on hard hose travelers and solid set systems. Irrigation systems wear and develop buildup, which affects their performance, both from an irrigation quality standpoint and from an economic standpoint. Calibrations are required once every two years for swine facilities in North Carolina with a state general permit and required once a year for swine facilities with an NPDES permit.

Here is a summary and how it will affect the calibrations you do:
- Before starting the calibration, you’ll need a manufacturer’s chart for your system’s sprinkler and nozzle combination, your irrigation design or wetted acreage determination.
- Perform calibrations during periods of no to very light wind (less than 5 mph)
- Check wetted diameter and flow under periods of normal pressure

For hard-hose travelers and stationary systems (solid sets), the following steps are needed:
1) Measure the nozzle size of traveler guns
2) Measure pressure at the nozzle or sprinkler
3) Measure the wetted diameter
of the nozzle or sprinkler

4) Measure the flow rate, and

5) Compare the measured pressure, wetted diameter, and flow rate against the manufacturer’s chart, irrigation design documents, and/or the wetted acreage determination.

Equipment needed to complete a calibration:

1) Pressure gauge, either a mounted gauge or a hand-held with pitot tube

2) Flow meter with in-line adapters IF field-measured nozzle pressure and manufacturer’s charts will not be used to obtain flow rate

3) Measuring tape or wheel (need about 200-300 feet of tape)

4) Flags for checking wetted diameter

5) Caliper for measuring nozzle size, and

6) Calibration forms for recording measurements

Although the rain gauge method that was once needed every three years is not required now to determine uniformity, sprinkler spacing (or lane spacing for travelers) must be within design specifications and pressure must be within the ranges provided by manufacturer (Liu, 2009; 9th SB 1217 Guidance Document, North Carolina 1217 Interagency Group, 2009). To check uniformity:

1) Compare field-measured wetted diameter and pressure to manufacturer’s charts, and

2) Calculate the sprinkler or lane spacing as a percentage of field-measured wetted diameter to determine if spacing falls in the recommended range.

Field data sheets at the end of the publication help calibrations to go more smoothly. If you have questions about calibrations, contact your county Extension Agent.

**Sludge Survey and Sprayer Calibrations**

Your lagoon must be surveyed once every year and your sprayer, whether solid set or traveler, must be calibrated once every two years. Now is the time to sign up for your free sludge/lagoon survey and sprayer calibrations. Contact Lynn Stillwell at the Sampson County office to sign up for this free service. 910-592-7161

**Hay Directories**

There are two web site directories for people selling or buying hay. It is free to list your hay for sale. 1. North Carolina Department of Agriculture’s Hay Alert is at http://www.agr.state.nc.us/hayalert/. Producers can call the Hay Alert at 1-866-506-6222. You can sign up to list your hay on-line. 2. The Southeastern NC Hay Directory is available at http://onslow.ces.ncsu.edu/files/library/67/HayDirectory.pdf. Call your Extension Agent to learn how to include your farm on the list.

**Forage Management Tips**

* Soil sample fields to be overseeded or planted in the fall.
* Apply limestone as far in advance of planting as possible.
* Consider a late planting of summer
annuals.
* Cross fence to help manage feed quality.
* Graze bermudagrass close (1 to 2 inch stubble) and harvest any growth not grazed every four-six weeks.
* Control summer weeds before they get too mature.

**July**
* Stick to a four to six week schedule of nitrogen applications on summer grasses.
* Do not delay application because of dry weather unless it has not rained at all since the previous application.
* Maintain harvesting frequency for quality hay.
* Hot, dry weather can result in nitrate poisoning of animals grazing stunted, highly fertilized summer annuals.
* Sample soils and apply lime on fields to be planted in the fall, if not already done.
* Decide which fescue pastures will be stockpiled for winter grazing.

**Upcoming Events**

**June**

- June 8th - Litter Injection Demonstration Caswell Research Station Kinston, NC Contact James Parsons to register 910-296-2143
- June 10th - Transport Quality Assurance Certification Class-Duplin County Extension Center at 1:00pm Contact Amanda Hatcher to register 910-296-2143
- June 14th - Sampson County Waste Sample Collection Day 8:30am-12 and 1pm-5pm. Cost of Samples are $5.00 make checks payable to NCDA&CS.

**July**

- July 27th-28th - 10 Hour Initial Animal Waste Operator Certification Type A. Sampson County Livestock Facility. Contact Patricia Burch at the Sampson County office 910-592-7161 to register.

Dear Reader,

If you have any questions about any of the information in this article or any upcoming events with Extension please contact the Sampson County Cooperative Extension Office at 910-592-7161. This newsletter and more information is also available on our website: [http://sampson.ces.ncsu.edu/content/swine_waste_management_forages](http://sampson.ces.ncsu.edu/content/swine_waste_management_forages)
And my blog: [http://sampsonswine.blogspot.com/](http://sampsonswine.blogspot.com/)

Thank you,

Lynn Stillwell Extension Agent-Agriculture- Swine and Waste Management

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