

Marion County Agricultural News

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New U of A Veterinary Diagnostic Lab Opens in Fayetteville

What was the cause of my animal's death? A new lab is open in Fayetteville for doing necropsy on dead animals. The services of this University of Arkansas lab are available to individuals as well as veterinarians. They can necropsy just about anything -- from a chicken to a horse, also dogs and cats. You should call ahead to discuss your situation, find out what the fee will be, and make arrangements. The animal must only be recently deceased for the necropsy to be successful. The phone number for the clinic is (479) 575-4827.

Nitrogen Rates

As a general rule, forage yields will increase as the nitrogen rate goes up. However, forage yield trials using different nitrogen rates have shown that 60 units of nitrogen is the most efficient rate of nitrogen. This rate of nitrogen gets you the most pounds of forage per unit of applied nitrogen. You will be applying 60 units of nitrogen if you apply 180 lbs of ammonium nitrate fertilizer per acre. Another example: you will be applying 60 units of nitrogen if you apply 133 pounds of urea per acre.

You usually get an increase of one ton per acre of forage if 50 to 60 units of actual nitrogen are applied per acre.

Test Your Knowledge!

True or False Questions (Answer at end of newsletter)

- 1. The toxin concentrations associated with fescue toxicosis symptoms of our common Kentucky 31 fescue, is reduced when you make fescue hay.*

Hay Fires

Hay making this spring has certainly been a challenge with the frequent rainfall that we have had. Although not very common you will occasionally hear of hay barns burning as well as hay stored outside. Fire is always a concern with hay, but it takes on even greater importance when an expensive barn can be lost in addition to the hay. Fire in hay may occur from either external or internal causes. Internally started fires are a result of hay experiencing an extreme heat. Heating is a direct result of internal microorganism activity that occurs in hay stored at high moisture levels. Even if excessive heating does not result in a fire, it will reduce forage quality.

The principal way to avoid fire resulting from internal heating (sometimes referred to as spontaneous combustion—though this term is misleading) is to bale hay at proper moisture levels. Hay in round bales should contain no more than 18 percent moisture when placed inside a barn, while hay in small rectangular bales should contain no more than 20 percent moisture. Moisture can be tested by using the microwave oven method or special hay moisture testing devices. Many folks have had a great deal of experience in predicting the moisture in the hay and when it ready to bale. Round bales of hay that are suspected of being too wet should be stored outside for about three weeks, until the danger of combustion due to heating has past.

The danger of fire from heating of hay of higher-than optimum moisture can be decreased somewhat by “loose stacking” the bales so that good air movement and ventilation can occur. Hay preservatives can reduce mold growth and help reduce (but do not always prevent) excessive heating in high-moisture hay.

If there is a need to check the temperature of stacked hay, it can be done by fitting a sharpened end on a 5 or 10 foot section of a one-half inch pipe, then driving it into the hay. A thermometer is then lowered into the pipe. Temperatures below 120 F are normal, and internal hay temperatures between 120 F and 140 F are in the caution range. Hay that has heated to 160 F or higher is in the danger range of catching fire. Temperature can build in hay, particularly within the first week or two after baling, so periodic monitoring of temperature until the danger of fire has passed is advisable.

Test Your Knowledge!

Livestock will get internal parasites (worms) by grazing. The worm eggs come out in the animal manure, they hatch into an infective larvae stage. This microscopic larvae stage will climb up the grass when moisture conditions are right (a heavy dew or rain). The animal will graze and become infected or re- infected with worms.

Question (answer at the end of newsletter)

2. The larval stage of the internal parasites (worms) that infect livestock can not climb any higher than __ inches up a blade of grass.



Pictured is Wayne Gay, Bruno, Arkansas, preparing to Calibrate his spray rig.

Common Questions & Answers About Weed Control

Q. – How long do herbicides have to be on the leaf surface of the weeds before rainfall occurs to be effective?

A. Three to four hours is plenty of time for most products. If it dries on the leaf surface, chances are it will have time to absorb into the plant. Often farmers will not spray if there is a chance of rain the next day. The result is, they may put off spraying until it is too late (weeds are too tall and mature).

Q. – Will the weed spray kill my clover?

A. Yes, many herbicides will kill clover. However, in many farm situations, there is not actually very much clover out there anyway and there are a lot of weeds. It is probably best to go ahead and treat for the problem weeds for a couple of years, improve your stand of grass and then reestablish clover at a later date.

Also, many do not realize 24-D amine is relatively safe over an established stand of white clover and lespedeza if you use a low rate of the herbicide (less than 1 quart per acre). White clover and lespedeza have a tolerance for a low rate of 24-D amine. It may stunt or set them back for a while but it usually does not kill them. Always read and follow labeled directions.

If the weed problem is not too bad and there is a lot of clover out there, you may choose to mow, brushhog or try spot spraying.

Q. – What herbicide should I use to kill prickly pear cactus?

A. A herbicide that has the active ingredient picloram in it. Some examples include Tordon, Surmount, Tordon 22K, or Grazon P + D. These herbicides will kill clover but should not harm the grass. It takes a long time for the cactus to die (several months, even a year later). Make follow-up treatments for escapes. Read and follow labeled directions for rates to kill the cactus.

Q. – I have about every kind of brush species in my pasture. What is a good spray to use to give a broad spectrum of brush control?

A. A mixture of Grazon P + D at one percent solution plus Remedy at 0.25 percent solution plus a surfactant at 0.25 percent solution. Example 100 gallon tank mix: 1 gallon Grazon P + D, one quart Remedy, one quart surfactant.

Q. – What are some pasture herbicides I can purchase without a permit issued by the Arkansas State Plant Board?

A. Some herbicides not restricted are:

Banvel, Vanquish
Cimarron (metsulfuron)
Martin’s Clean Pasture (metsulfuron)
Maverick
Milestone
Pastureguard
Remedy (Triclopyr)
Roundup (glyphosate) numerous generic glyphosates
24-D in Quart containers

If a herbicide is restricted, it is supposed to say for “Restricted Use Only” somewhere on the container.

Q. – What herbicide can I use to control johnsongrass in a bermudagrass hayfield?

A. Maverick (sulfosulfuron) at 1.33 oz per acre with 0.25 percent surfactant. The johnsongrass should be young, about 24 inches tall and actively growing, with good moisture and humidity. You should calibrate your sprayer so that you can apply the correct rate of the herbicide per acre.

Q. What are good products to use to kill blackberries and dewberries?

A. Martin’s Clean Pasture at 0.5 oz per acre is around \$8 per acre, a relatively cheap and effective treatment for blackberries. Also, Cimmarron Plus is effective at 0.625 to 1.0 oz per acre. **A special note: Cimmarron Plus and Martin’s Clean Pasture can severely stunt or even kill fescue.** Cimmarron and Martin’s Clean Pasture are safe to use on established bermudagrass and orchardgrass. Read and follow labeled directions. Another good treatment is Remedy at three pints per acre (a relatively pricey treatment but safe on fescue). It will be impossible to achieve 100 percent control with one application. Follow up with another treatment, or spot treat next year.

Q. – When is a good time to spray blackberries and dewberries?

A. During full leaf out in the spring when they are actively growing. Applications at bloom have also been successful. Good soil moisture and warm temperatures are important. A time to avoid spraying is when fruit or berries are on the plants or there are dry soil conditions. There have been some cases when late summer or early fall applications have been very effective, if there is good soil moisture. Expect to do a follow-up treatment the following year.

Q. – What is a surfactant? Is dish soap just as good as surfactant? My neighbor told me to just use dish soap.

A. A surfactant is very important to use when foliar spraying weeds and brush. A surfactant will increase the effectiveness of your foliar applied herbicides. It helps to get much better absorption of the herbicide into the leaf. If a surfactant is not applied, the herbicides and the water mix can bead up and roll off the leaf surface, so absorption will be reduced.

The general recommendation when foliar spraying is to use a good surfactant that has a minimum of 80 percent surfactant. Most household soaps are only around 20 percent surfactant. A good 80 percent surfactant can usually be purchased for \$10 to \$12 per gallon. Another reason not use household soaps is that you can end up dealing with an excessive amount of foam. Always read and follow labeled directions on the herbicide container on type of surfactant to use and mixing instructions.

Some additional comments; The best long-term weed control is a good thick stand of grass. Use management that promotes a healthy stand of grass (good soil fertility practices, avoid overgrazing pastures, utilize rotational grazing, etc.). The best weed control programs I have seen include all three parts: 1) Management that encourages a thick stand of grass 2) Proper use of herbicides 3) Timely mowing when needed. If you do a good job on numbers 1 and 2, number 3 will not be needed very often.

Special note: If you consider riding a brushhog or mower around in a field for hours and hours as a form of recreation, just disregard numbers 1 and 2.

Pond Turnover and Fish Kill

With warm temperatures of summer, there comes the risk of a farm pond turnover and a fish kill. The typical contributing factors of a fish kill in a farm pond are several days of cloudy weather combined with a heavy rainfall event. You may ask yourself why these factors would lead to a fish kill in a farm pond. To answer this you need to understand some basics about summer stratification of water in a farm pond.

During spring and summer, the surface of the pond heats up. Cold water is heavier than warm water, so you have warm water at the surface and cold water in the deeper parts of the pond. The formation of layers of water within the pond is a part of a process called stratification. These layers will normally resist mixing.

At the surface layer, oxygen is being produced by photosynthesis of small plants or plankton and oxygen is also entering the surface water by exchange with the air and wind. Because of stratification, this oxygen does not enter the deeper layers of water. You will end up with a pond with plenty of oxygen, plants, and fish in the shallow water or surface water layer and no oxygen, plants or fish in the deep water.

This can become a problem if the water in the pond mixes suddenly, which is called a turnover. When a turnover occurs, the water layers are mixed and the oxygen in all of the water (including the surface layer) may become too low for fish to survive. Larger fish usually die first. In the early stages, you may observe fish at the surface trying to get oxygen. You may scare them away temporarily, but they will quickly return to the surface.

Fall turnovers happen every year in most ponds and lakes, and are typically harmless because they occur so gradually. Summer turnovers are usually the ones which cause fish kills. These are typically the result of heavy thunderstorms, which produce several inches of cold rain. The cloud cover and cold rain cool the surface layers. The rush of cold rainwater causes the surface

layers to mix with the deep water beneath. The result is that all of the water in the pond is without oxygen, so that fish begin to suffocate and die.

Is there anything to do to prevent or save your fish in case of turnover? Commercial fish producers use electrical aeration systems. These may not be practical for most owners of a home farm pond. Also most commercial fish ponds are not over four or five feet deep, but may be two to 10 acres in size. Such fish pond dimensions help to reduce stratification and increase air exchange in a pond. Many of these ponds are located in eastern Arkansas in the delta.

If you notice that a turnover is occurring, and you catch it before too many fish have died, there may be emergency steps you can take to save the fish. Anything you can use to spray or splash and mix large volumes of water into the air at the surface of the pond can be helpful. You can use a pump and hose or an outboard motor to create a “rooster tail” of splashing water at the surface. Anything you can do to mix and splash enough water with air and provide an oxygenated refuge may help save some fish.

Avoid overstocking your pond. It is very easy to overstock a small pond in particular. Avoid letting excessive nutrients such as animal manures enter the pond. Also, avoid overfeeding your fish. Do not feed more than the fish will eat in about 15 minutes.

THE ANSWERS!

Answer to question #1. – True

Answer to question #2 – Four inches

In Closing...

It is my pleasure to provide Marion County Agricultural Producers with educational information to assist you in your efforts. All of our meetings and activities are open to all interested persons without regard to race, color, national origin, religion, gender, age, disability, marital or veteran status, or any other legally protected status. We are an Affirmative Action/Equal Employment Opportunity Employer. Persons with disabilities who require alternative means for communication of program information (large print, audiotapes, etc.) should notify the county extension office as soon as possible prior to the activity.

Sincerely,

Terry L. Davis

County Extension Agent—Staff Chair

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