

Bee County Agriculture Newsletter

Volume 2, Issue 3

March 2017

CALENDAR OF EVENTS

PRIVATE APPLICATOR TRAINING

DATE: APRIL 13, 2017

PLACE: BEE COUNTY EXPO CENTER MEETING ROOM

TIME: 8:00AM – 12:00PM

PESTICIDE APPLICATOR TRAINING COURSE COST \$50 WHICH INCLUDES THE COST OF STUDY MANUALS. PLEASE CONTACT EXTENSION OFFICE AT 361-621-1552 TO RESERVE YOUR SPOT.

2017 AGRICULTURAL SYMPOSIUM – CEU HOURS WILL BE OFFERED

DATE: APRIL 18, 2017

PLACE: BEE COUNTY EXPO COLISEUM MEETING ROOM

TIME: TBA, PLEASE CHECK WITH EXTENSION OFFICE FOR TIME

Inside This Issue

- Lone Star Herbicide Resistance Screening Program
- Revised Worker Protection Standard
- How to Compost Properly
- Pregnancy Determination: Methods, Pluses, and Minuses
- BQA (Beef Quality Assurance) Tips
- Using Treated Lumber in the Garden
- Flag the Technology

Lone Star Herbicide Resistance Screening Program

Not detecting resistance early enough can be a costly mistake. I wanted to make you aware that we have a Weed Scientist at College Station, Dr. Muthu Bagavathiannan, who is doing free herbicide resistance screenings. If you suspect you have resistance and want to confirm whether you have a problem, this is a great opportunity.

Please include the following details with the shipment:

- Weed species collected*: *pigweed, etc.*
- Crop in which the weed was found: *cotton, corn, wheat, etc.*
- Location of the field: *county, specific address/intersections or GPS location if possible*
- Suspected resistance: *to which herbicides*
- Management history: *the crop rotation and herbicide program, if known*
- Contact details: *your name, phone number and email address*

**collect seeds from about 10 – 15 plants within in the suspected resistant patch, put them in a paper bag (avoid Ziplocs if you can) and dry them as much as you can before you ship*

Ship your samples to:

Dr. Muthu Bagavathiannan
Texas A&M University
370 Olsen Blvd – Mail stop 2474
College Station, TX 77843 - 2474

Revised Worker Protection Standard

Owners of farms, forests, nurseries and greenhouses that use pesticides in agricultural plant production now have access to a new manual that outlines the new regulations and safeguards under the revised 2015 Worker Protection Standard.

The new manual, called “How to Comply With the Revised 2015 WPS for Agricultural Pesticides,” was recently released by the U.S. Environmental Protection Agency and details the important new rules that impact employers of agricultural workers.

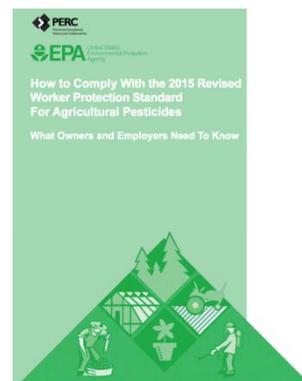
The rules impact thousands of growers statewide. They include requirements for safety training, posting of application information, application signage and verbal warnings, restrictions during applications, decontamination supplies, and emergency assistance.

Compliance with most of the new rules will be required by January 2017. However, new training content, centrally displayed information, and application exclusion zone restrictions will not be required until January 2018.

Another change for growers is that the family exemption under WPS has been expanded to include in-laws, grandparents, grandchildren, aunts, uncles, nieces, nephews, and first cousins.

The family exemption eliminates many WPS requirements, including the handler minimum age, but not the requirement for personal protective equipment, restricted entry intervals, or other restrictions during applications.

The new compliance manual can be downloaded for free at pesticideresources.org/index.html



How to Compost Properly – information from Joseph Masabni, Assistant Professor and Extension Horticulturist, The Texas A&M University System

Most gardeners have a static compost pile. They believe that composting consists of filling the pile, waiting a few weeks, and then magic happens – the compost is ready. In reality, most compost piles are merely trash heaps of garden and kitchen waste.

To compost properly, keep the C:N (carbon to nitrogen) ratio at 25:1 to 40:1 and the moisture, oxygen, and pH in the pile at optimum levels.

C:N ratio: To maintain the correct C:N ratio, build the pile with alternating layers of brown matter such as dead tree leaves, and green matter such as grass clippings. Adding equal amounts of green matter (grass clippings, kitchen waste) and dry matter (dry leaves) will often achieve this desired ratio.

Moisture: Water the compost pile regularly to keep the microorganisms alive and to soak the weed seeds fully. Don't add so much water that it flows out from the bottom of the pile.

pH: pH meters are available in garden centers and can be used to estimate the pH level of the compost pile. However, an easy and more practical way to tell whether the compost pile is “cooking” properly is by its smell. If the compost pile smells sour or like a rotten egg, the pH is not correct. A compost pile at the proper pH should smell earthy, like freshly dug garden soil. If the pile smells bad, check to see if it is too wet. You may be adding too much water or wetting too often. Let the pile dry for a while, and wet it less often. Another option is to turn the pile and mix it thoroughly. If the first two measures do not help, mix lime into the pile to correct the low pH level and reduce the rotten egg smell.

Turning: periodically mix the materials within the pile to introduce more oxygen and distribute the moisture evenly. To add as much air into the pile as possible, break up any clumps, move the drier material from the outer edges into the center. Turning the compost will also enable the temperatures at the edges and surface of the pile to rise enough to kill weed seeds. The pile must be mixed thoroughly during the active phase to ensure that all the material is heated for a long enough period to kill the seeds.



Pregnancy Determination: Methods, Pluses, and Minuses – Beef Cattle Browsing Vol. 22, No. 1

There has long been interest in diagnosing pregnancy. Some 4000 years ago, reference is found in Egyptian records to determining pregnancy in women based on changes in skin color and moistness (there were no experimental results reported on accuracy of the method). In beef cattle, the most common method for some time has been rectal palpation of the reproductive tract. Dr. Bruce Carpenter, presented information at the Texas A&M Beef Cattle Short Course comparing three methods for determining pregnancy. A summary of his presentation follows:

Rectal Palpation – is a very quick process requiring little equipment. It does require some training and experience, especially for evaluation in early stages of pregnancy though, in practice, many cattlemen test cows when weaning calves, culling open cows at that time. Cows can be sorted, based on pregnancy determination, right out of the working chute. Direct cost is low, from about \$4-10/head. Indirect cost comes from misdiagnosis. An open cow called pregnant can cost up to 8 months of a cow's cost without a return. A pregnant cow called open, if culled, incurs unnecessary costs included in replacing with a new female.

Blood Test – are highly accurate ($\geq 95\%$). There are two types. In one (BioPryn® from BioTracking, Inc.), blood samples are sent to a lab for analysis, with a cost of \$2.50-3.00 per sample plus shipping. Results are available within 24 hours of when the laboratory receives them, so cows must be held for that period before management decisions are made to keep or cull at that time. In the other test (Bovine Pregnancy Test from Idexx), available through veterinarians, samples can be analyzed in groups as collected, so cows can be evaluated and management decisions made the same day. Some practitioners prefer to analyze samples in their clinic; cost is usually \$4-5 per sample with no shipping required.

Testing can be done as early as 28 days post breeding (i.e, in first-calf heifers). Lactating cows should not be tested until at least 75 days after calving because the protein being measured stays in the system from the previous pregnancy for about 75 days. This is not a problem in herds with controlled breeding/calving seasons of 90 days or less because all cows will have calved and be 75+ days after calving by the end of the breeding season. So, as Dr. Carpenter indicated, just wait the recommended 28 days (or more) from when bulls are removed to bleed and test.

Ultrasound – is also highly accurate but does require expensive equipment and training and skill. Besides merely determining pregnancy, ultrasound can be used for such things as determining fetal gender and number and viability of fetuses.

BQA Tip of the Month – Needle Selection

Proper needle selection is important to reduce risk of broken needles and ease the process of giving injections. Both needle length and gauge (thickness) should be considered.

Shorter needles (i.e., 5/8 and 3/4 inch) make it easier to properly give subcutaneous injections. For intramuscular injections, a 1-inch needle is sufficient even on mature bulls and cows; longer needles increase risk of bending and breaking. For thicker products, a 16-gauge needle works well. Either a 16 or 18-gauge needle is fine for thinner products. Needles smaller than 18-gauge should be avoided for giving injections to cattle.

GAUGE	HUB COLOUR	SIZE	DIAMETER
16G	White	1x1/2"	1.60 mm
18G	Pink	1x1/2"	1.20 mm
19G	Cream	1x1/2"	1.10 mm
20G	Yellow	1", 1x1/4", 1x1/2"	0.90 mm
21G	Green	1", 1x1/4", 1x1/2"	0.80 mm
22G	Black	1", 1x1/4", 1x1/2"	0.70 mm
23G	Blue	1", 1x1/4", 1x1/2"	0.60 mm
24G	Medium Purple	1", 1x1/4", 1x1/2"	0.55 mm
25G	Orange	1", 1x1/4", 1x1/2"	0.55 mm
26G	Brown	½", 1x1/2"	0.45 mm

BQA Tip of the Month – Injection Needle Safety

When giving injections, needles can break or separate from the barrel of the syringe and remain in the animal. While this is extremely rare, consumer safety is seriously compromised if the animal enters the food chain. Best management practices to prevent broken needles include:

- Restrain animals properly
- Do not straighten and use bent needles again, replace immediately
- Change needles when they get dull or after 10 head, whichever comes first
- If you have a problem with bent needles (even after proper restraint), step up to a larger diameter needle, such as going from 18 to 16 gauge.



Using Treated Lumber in the Garden – University of Illinois

Extension, posted by Candice Hart

A frequent question that I get from gardeners is about the safety of using treated lumber in the garden, especially for raised beds. The good news is that there is plenty of research that has already been done on this exact subject and the new treated lumbers have shown to be safe for garden use.

The advantage of treated lumber of course is the fact that it has excellent decay resistance, so it is often used in situations when wood needs to be in contact with soil. However, many gardeners are still concerned that the chemicals used to preserve the lumber could harm garden plants and the people who eat them.

A publication from Penn State University Extension explains exactly what treated lumber is, but essentially it consists of taking preservative chemicals either purchased by the consumer and applied themselves, or by using chemicals intended only for use in commercially pressure-treated lumber.

Chemical preservatives can be divided into two major groups: organic (or oil borne) and inorganic (or waterborne). Organic preservatives include pentachlorophenol, creosote (commonly used on railroad ties), and coal tars, while inorganic preservatives include chromated copper arsenate (CCA), ammoniacal copper arsenate (ACA), and acid copper chromate (ACC). The color of the wood is usually the best indicator of the preservative used. CCA-treated lumber is usually green in color, unless dyed to look brown.

CCA-Treated Lumber – The toxicity concerns regarding pressure treated wood have been primarily focused on the toxic effects of arsenic in CCA-treated lumber. Studies have shown that, although most of the elements used in CCA are fixed in the wood, some amount of arsenic, chromium, and copper can be dislodged from the lumber as a result of exposure to rain, deck washes containing brighteners, and irrigation water.



Good news is that on February 12, 2002, the Environmental Protection Agency (EPA) announced a voluntary decision by the wood preserving industry to phase out the use of wood preservatives that contain arsenic for any wood products destined for consumer use. That means that CCA treated wood is no

longer available to the public and no longer an issue for gardeners unless using older wood purchased before 2003.

(Continued on next page)

Other wood products – So what other wood products are available to use in the garden? The EPA has approved alkaline copper quaternary (ACQ) for use in garden structures. This product is higher in copper than CCA, but is free of arsenic. How do you know what the wood has been treated with? If you are purchasing lumber there should be a tag stapled to it that tells you what type of chemical has been used to pressure treat it.

Another lumber choice for gardening applications today is naturally rot-resistant wood such as redwood or cedar. These are always a good choice for gardens where food plants (vegetables, fruit) are grown.

Reducing your risk – Still worried about exposure to CCA-treated or other chemically treated wood? Here are a few tips to reduce your risk:

1. Use alternative materials. Any possible risks from exposure of plants or humans to CCA metal can be eliminated by not using CCA-treated wood for gardening purposes, do not allow sawdust or wood scraps to fall onto garden beds and do not put CCA sawdust in your compost pile.
2. Cover CCA-treated wood used for raised garden beds or borders with heavy plastic to prevent contact with garden soil.
3. Manage your garden soil to reduce plant availability. Plant vegetables, especially root crops, at least 12 inches from CCA-treated wood. Concentrations of CCA metals will be highest in soil immediately adjacent to the wood.
4. Thoroughly wash all soil from vegetables grown in close proximity to CCA-treated wood. In general, soil will have much larger concentrations of CCA metals than plant tissue. Thus, human intake of CCA metals can be reduced by removing all soil from vegetables immediately after harvest.
5. Peel root crops grown in close proximity to CCA-treated wood. Plant tissue concentrations of CCA metals will be highest in roots, especially at the root surface. Thus, peeling root crops such as carrots, potatoes, and turnips will remove much of any of the CCA metals that the plant may have taken up.



Flag the Technology And Avoid Crop Injury!

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West Texas Agricultural
Chemicals Institute



Flag the Technology is a field marking program originally developed by personnel at the University of Arkansas¹ and is now a widely accepted practice to reduce the risk of a misapplication. This practice will also make the applicator aware of sensitive crops adjacent to the field being sprayed. Recent herbicide tolerant crop introductions have provided new options for controlling herbicide resistant weeds. However, the herbicides used in these programs can have detrimental effects on non-tolerant crops. To minimize misapplications, marking fields with designated color flags representing the herbicide tolerant trait(s) has become a beneficial practice. Flags should be placed in a location clearly visible to applicators upon entry into the field, or GPS coordinates.

Since the color of the flag represents a specific trait technology, multiple flags may be placed in a field where stacked technologies are used, such as those possessing both Liberty Link and Roundup Ready traits. The objective of the Flag the Technology program is to help reduce herbicide application errors, improve herbicide and technology stewardship, and foster good community relations.

¹ Bob Scott, Dharmendra Saraswat, Ples Spradley and Ron Baker, "Flag the Technology" FSA2162



Flags should be placed at all likely entry points and/or GPS coordinates into the field.



Very low concentrations of some herbicides drifted on to non-tolerant crops can cause noticeable injury.

² Please look for the mobile app available in 2016.



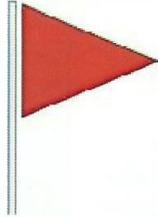
Preferred Flag Size

6' x 1/4" fiberglass pole with minimum 11" x 17" flag for maximum visibility

Color Codes

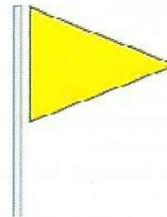
RED

signifies conventional varieties with no herbicide technology traits, vineyards, apiaries, orchards, vegetable fields and organic crop production. *Extreme caution.*



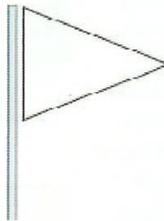
YELLOW

is the color chosen for Clearfield® rice, sunflower, wheat and canola technologies, STS® soybeans¹ and INZEN grain sorghum.



WHITE

represents technology that is tolerant to glyphosate herbicide. (e.g., Roundup Ready, Glytol)



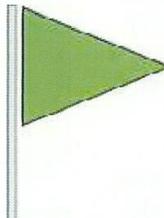
TEAL (with White Stripes)

indicates tolerance to both 2,4-D and FOP (ACCase) herbicides. The white stripes indicate tolerance to glyphosate. Where glufosinate tolerant cotton and soybean are planted, a green flag should be added to denote tolerance to glufosinate².



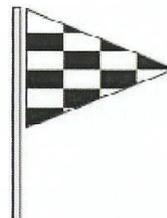
GREEN

This technology is tolerant to glufosinate.



BLACK & WHITE

The black and white checks indicate tolerance to both dicamba and glyphosate. A green flag should be added for cotton to denote glufosinate tolerance².



¹ Although many herbicides are in the ALS family of herbicides, crops with this technology are not tolerant to all ALS herbicides.

² Stacked technologies may require more than 1 flag.

Produced by the Department of Soil & Crop Sciences
soilcrop.tamu.edu

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The Texas A&M University, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.

WANTED: Educational Program Topic Ideas

Do you have an idea for an educational program or series? The Bee County AgriLife Extension Agent would like to hear from you!!!

Topics in the following areas are always welcome:

- **Beef cattle**
- **Crops and forage**
- **Gardening**
- **Poultry**
- **Wildlife**

If you have an idea for a program please contact Robbin Reininger, Bee County Agriculture and Natural Resources Agent at:

- 361-621-1552 (office)
- 979-292-4139 (cell)
- robbin.reininger@ag.tamu.edu (email)
- 107 South St. Mary's, Beeville, TX 78102 (office location)

AGRI-NEWS TRIVIA

- One Bale of cotton can make:
 - 215 jeans
 - 249 bed sheets
 - 409 men's sport shirts
 - 690 Terry bath towels
 - 765 men's dress shirts
 - 1,217 pillow cases
 - 1,256 boxer shorts
 - 3,085 diapers
 - 313,600 \$100 dollar bills



Newsletter by E-Mail

Due to increased postage costs, we would like to make future newsletters and announcements available to you electronically. If you would like to receive future information by email send an email to robbin.reininger@ag.tamu.edu. Benefits of having your newsletter sent through e-mail are: pictures and graphs will be in color, easy to store on your computer, no papers to mess with, click-able links to other internet sites, and sooner access.

Check out and 'Like' the Bee County Agriculture and Natural Resources Facebook Page:
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We're on the Web! <http://bee.agrilife.org>

Robbin L. Reininger, CEA-Ag/NR

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