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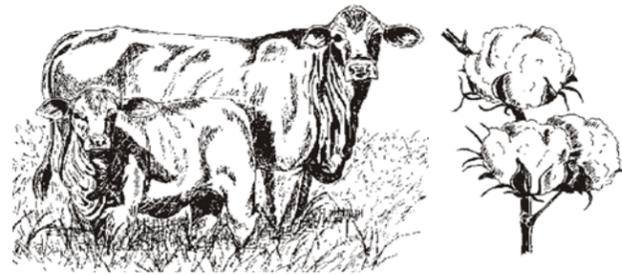
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*The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating*

For more information contact:



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**County Extension Agent -**  
**Agriculture & Natural Resources**  
**Refugio County**  
107 East Roca Street, Refugio, TX 78377  
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TEXAS A&M  
**AGRI LIFE**  
EXTENSION

# THE REFUGIO COUNTY

## AGRICULTURE CONNECTION

<http://refugio.agrilife.org/>

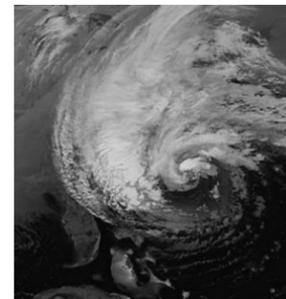
JULY-AUGUST 2014

TEXAS A&M  
**AGRI LIFE**  
EXTENSION



Refugio County  
107 East Roca Street  
Refugio, Texas 78377

### Hurricane Season has Officially Begun: Be Prepared



In its 2014 Atlantic hurricane season outlook issued on May 22, 2014, NOAA's Climate Prediction Center is forecasting an active or extremely active season this year.

For the six-month hurricane season, which begins June 1, NOAA's Atlantic Hurricane Season Outlook says there is a 70 percent likelihood of 8 to 13 named storms (winds of 39 mph or higher), of which 7 to 11 could become hurricanes (winds of 74 mph or higher), including 1 to 2 major hurricanes (Category 3, 4 or 5; winds of 111 mph or higher).

These ranges are below the seasonal average of 12 named storms, 6 hurricanes and 3 major hurricanes.

*Information was collected from the NOAA National Weather Service Climate Prediction Center.*



**NOAA** NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION  
UNITED STATES DEPARTMENT OF COMMERCE

«OrganizationName»  
«FirstName» «LastName»  
«Address»  
«City», «State» «Zipcode»

# Rainfall Index - Annual Forage Insurance

DeDe Jones, Stan Bevers, and Michelle Jones

The Rainfall Index—Annual Forage (RI-AF) Insurance plan is a risk policy designed to provide livestock producers the ability to buy protection against losses due to a lack of moisture. While it is similar to Pasture Range and Forage (PRF) Insurance, the difference lies in the type of commodity covered. PRF encompasses perennial grasses such as pasture and hay, while RI-AF is strictly for annual forage crops. These include but are not limited to winter small grains (wheat, oats, rye, triticale, etc.) and spring plantings such as sudan, haygrazer, and millet.

Under both plans, payment is not determined by individual damages, but rather area losses based on a grid system. One major difference between the two policies is that while PRF allows producers to insure only a portion of their acreage, RI-AF requires coverage on all certified acres that are not intended for grain production.

Participants must also choose a **maximum** of three, two-month intervals per growing season per year. Insured acres are then spread between time periods, with no more than 40% of acres placed in any interval. **The sign-up deadline for RI-Annual Forage is July 15th for the fall growing season (Sept 1, 2014-March 31, 2015) and December 15th for the spring season (March 1, 2015-September 30, 2015). All premium payments are due by August 30, 2015.**

Coverage levels between 70 and 90 percent are available. Once coverage is selected, the producer chooses a productivity factor between 60 and 150 percent. Productivity factor is a percentage of the established county base value for annual forage. Base value is a standard rate published by the Risk Management Agency (RMA) for each county. For example, Hansford County's value is \$107.74.

The Rainfall Index determines RI-Annual Forage coverage. This model uses National Oceanic and Atmospheric (NOAA) Climate Prediction Center data and a 12 x 12 mile grid system. **Indemnities are calculated based on the deviation from normal precipitation within a grid for a specific period selected.**

CALL FOR ADDRESSES AND EMAIL

If anyone knows of someone who does not receive this newsletter, please let us know!



Also, if you would like to receive this newsletter by email, let us know!

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**AGRILIFE  
EXTENSION**

Is on the Web at...

<http://refugio.agrilife.org/>

## Rainfall Index - Annual Forage Insurance

### Hansford County Example

County Base Value per Acre	\$107.74
Subsidy Level	51% to 59%
Maximum % of Value Index Interval	40%

**Example:** Joe Farmer has 500 acres of grazed wheat in Hansford County. If he chooses a 90% coverage level and 150% productivity factor, his coverage per acre is \$145.45 (\$107.74/acre X 0.90 X 1.50) for a total of \$72,725. He insures 40% of this value in the September/October interval, another 40% in the November/December interval, and the remaining 20% in the January/February interval.

**Calculations:** If rainfall in Sept/Oct was 50% of normal, the producer is paid as follows:

0.90 coverage – 0.50 normal rainfall = 0.40  
 0.40 X 1.50 productivity factor = 0.60  
 0.60 X \$107.74 base value = \$64.64/acre ins. payment  
 \$64.64/acre X 200 acres = **\$12,928.**

If rainfall in November/December was 20% of normal, the farmer is paid as follows:

0.90 coverage – 0.20 normal rainfall = 0.70  
 0.70 X 1.50 productivity factor = 1.05  
 1.05 X \$107.74 base value = \$113.13/acre ins. payment  
 \$113.13/acre X 200 acres = **\$22,626.**

Assuming rainfall in January/February was normal and no indemnity is collected, Joe Farmer's total annual payout is \$35,554, with an estimated producer-subsidized premium cost of \$11,000 (\$22/acre). Premium expenses vary by coverage levels and intervals selected.

More information on Rainfall Index—Annual Forage Insurance can be found at.

<http://www.rma.usda.gov/policies/ri-vi/annualforage.html>  
 To sign up for the program, contact your local crop insurance agent.



## BEEF CATTLE BROWSING

Dr. Stephen Hammack, Professor & Extension Beef Cattle Specialist Emeritus

### MARCHING TOWARD “SUSTAINABILITY”

Sustainability of beef production is a term being used a lot these days. Some of the largest foodservice businesses, and others, say they want their beef to come from sustainable production. But they're having trouble defining “sustainable beef”. The recently formed Global Roundtable for Sustainable Beef is attempting to address this issue. The group is composed of:

- producer groups (including the National Cattlemen's Beef Association, Canadian Cattlemen's Association, and Cattle Council of Australia),
- commerce and processors (such as Cargill, JBS, Tyson, Elanco, Merck, and Dow),
- retailers (including McDonalds and WalMart),
- “civil society” groups (including organizations such as the National Wildlife Federation, Earth Innovation Institute, and Rainforest Alliance).

The Roundtable has preliminarily drafted the following sustainable beef principles:

1. Natural Resource: Global sustainable beef stakeholders produce beef in a manner that identifies and manages natural resources responsibly and maintains or enhances the health of ecosystems.
2. People and Community: Global sustainable beef stakeholders protect and respect human rights and recognize the critical roles that all participants within the beef value chain play in their community regarding culture, heritage, employment, land rights and health.
3. Animal Health and Welfare: Global sustainable beef stakeholders respect and manage animals to ensure their health and welfare.
4. Food: Global sustainable beef stakeholders ensure the safety and quality of beef products and utilize information-sharing systems that promote beef sustainability.
5. Efficiency and Innovation: Global sustainable beef stakeholders encourage innovation, optimize production, reduce waste and add to economic viability.

Time will tell where this goes and what the impact will be on the various segments of beef production. ([grsbeef.org](http://grsbeef.org))

Did you miss a program or want to watch a video to learn something new?



Check out the Agriculture Videos on our Website at:

<http://refugio.agrilife.org/videos/agriculture-videos/>

# TEXAS DEPARTMENT OF AGRICULTURE

## AGRICULTURE PESTICIDE PROGRAM



### Convenience Testing for Private Pesticide Applicators

The Texas Department of Agriculture (TDA) has contracted with PSI Services (PSI) to administer exams for agricultural pesticide applicator licensing. This is the same vendor that administers exams for structural pest control licensing. PSI has been providing credentialing and testing services to state and federal agencies, private sector businesses and professional associations for over 65 years.

PSI will provide both excellent quality exam opportunities and a convenient schedule for pesticide applicators to test in 22 locations across the state. The schedule will provide more testing opportunities than previously offered. By outsourcing testing to a third-party vendor, the Department's resources may be used in a more consistent and efficient manner.

#### STEPS TO BECOMING A PRIVATE PESTICIDE APPLICATOR

- **Step 1:** Attend a Private Pesticide Applicator training session **FIRST**. Contact your county [Texas A&M AgriLife Extension](#) office for training opportunities.
  - You may purchase training materials at [www-aes.tamu.edu](http://www-aes.tamu.edu) or call (979) 845-1099.
- **Step 2:** Upon completion of the training, a Training Verification form (D-1411) will be provided to the applicant.
  - Applicants should keep the yellow copy for their records.
  - The white copy (original) should be mailed to TDA with the Private Pesticide Applicator license application form (PA-400P).
- **Step 3:** The applicant needs to obtain a hard copy of the [Private Pesticide Applicator license application form](#) (PA-400P) from TDA. (Website: [www.TexasAgriculture.gov](http://www.TexasAgriculture.gov) or Phone: 1-800-835-5832 or 512-463-7622).
- **Step 4:** Submit the completed Private Pesticide Applicator application form, license fee of \$60, and the white (original) copy of the Training Verification form to TDA for processing.
- **Step 5:** When the license application is accepted, TDA will send the applicant a letter in the mail with their Account Number. This **Account Number** is the number the applicator will use to register and schedule the Private applicator exam with PSI
- **Step 6:** Applicants can go to [PSIexams.com](http://PSIexams.com) or call 1-800-733-9267 to schedule an exam at one of 22 locations around the state.
  - A Pesticide Licensing Examination Candidate Information Bulletin is provided at the PSI website to assist the applicant with the exam scheduling process.
  - A private applicator exam is free for the first attempt.
  - If the applicant fails the first attempt, the second (or subsequent) attempts will require a payment of \$52.00 each time to PSI. There is a 24 hour waiting period to take a repeat exam.
  - PSI will provide a confirmation number and testing location information.
- **Step 7:** Upon completion of the exam, the testing center will provide test results immediately. A passing grade is 70% or higher.
- **Step 8:** PSI will send exam scores to TDA daily. If all licensing criteria are met, TDA will issue the license.

**Important:** If an applicant has any questions about licensing or categories, please contact TDA at 1-800-835-5832 or 512-463-7622. PSI staff cannot provide licensing advice or information.

Texas Department of Agriculture – Agriculture Pesticide Program | P.O. Box 12847, Austin, TX 78711 | phone 800-TELL-TDA

**Next Private Applicator Training will be November 7, 2014!!**



## I'll bet the beef is good.

It had better be. The Texas Beef Quality Producer program is all about the food.

The TBQP program was developed to assist cattlemen in producing a safer, more wholesome food product. Better beef management practices help deliver a better meal for the all-important consumer. Get ready to participate in an upcoming Texas Beef Quality Producer training near you.

The TBQP program is built upon a proven system of Best Management Practices. This half-day session allows producers to become BQA trained. You should get your seat reserved now because producers are finding the benefits go well beyond the ranch gate... through the livestock market, to the feedyard and most importantly, all the way to the consumer.

Our nation's Beef Quality Assurance (BQA) programs are vital. They help cattlemen give the consumer a wholesome eating experience – even with market cows and bulls. And a good eating experience with beef brings the consumer back for more.

Call or go online to RSVP for your seat. Stacy Fox, TSCRA, [sfox@tscra.org](mailto:sfox@tscra.org)  
800-242-7820 • [www.texasbeefquality.com](http://www.texasbeefquality.com)

A collaborative effort of:



### Next Event: Refugio, TX - September 19, 2014

Refugio County Fairgrounds  
1.7 miles north of Refugio on Hwy 183 turn west onto TX-202. After .5 miles, turn left onto Fairgrounds Road. Go .8 miles and the fairgrounds will be on your right. Watch for TSCRA signs

Registration - 9:30 a.m.

Program - 10:00 a.m.

Program should conclude around 3:00 pm

Lunch is included

Please RSVP to:

TSCRA at 800-242-7820 or the Refugio County Extension Office at 361-526-2825



Training programs cover Beef Quality Assurance, industry updates, record keeping, environmental stewardship and proper management practices associated with genetic selection, cattle handling, culling, vaccination, drug use and more.

**Can't make the next training?**

**BQA certification is available online! Visit [www.texasbeefquality.com](http://www.texasbeefquality.com)**

A SPECIAL THANKS TO OUR SPONSOR



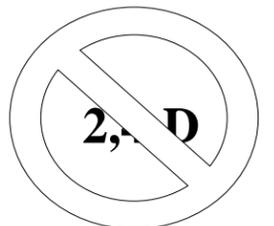
## Reminder

Texas Department of Agriculture restricts the use of products with **2,4-D** in Refugio County between

**March 1**

And

**September 15**



## Protecting your groundwater quality



Most U.S. groundwater is safe for human use. However, contamination can and does happen. There is much that informed well owners can do to minimize the potential for contamination to enter their water supply. Here are five strategies for doing so:

**#1--Maintain your well.** Regular well maintenance includes, but is not limited to:

- Checking the visible parts of your well system monthly for signs of wear and tear or damage
- Getting a periodic water well system inspection by a qualified water well professional
- Locating any abandoned wells on your land; have a water well system professional properly decommission it

**#2--Test your water annually for bacteria, nitrate, and anything of local concern.**

- Water testing is a diagnostic tool that can detect new contamination, possibly leading to groundwater protection remedies

**#3--Proper water well system construction.**

- When building or modifying a well system, use a qualified water well system professional who can build your system to any applicable codes and best practices.

**#4--Use good well owner property use practices.**

- Keep animals away from the wellhead
- Don't mix or use pesticides, fertilizers, degreasers, fuels, and other pollutants near the well
- Never dispose of wastes in dry or abandoned wells
- Have a qualified septic system service provider pump and inspect your septic system
- Avoid disposing of hazardous substances in your septic system
- Be careful around the yard to avoid damaging the wellhead

**#5--Protecting groundwater after a natural disaster.**

- After a natural disaster such as a flood, tornado, earthquake or hurricane that impacts your well, use a qualified water well system professional to assess your system and perform repairs and maintenance
- Post-disaster well cleaning may include removal of debris from the well, cleaning individual system components, and disinfection

# Weed Resistance to Herbicides

Paul A. Baumann, Ph.D.

*Professor and Extension Weed Specialist*

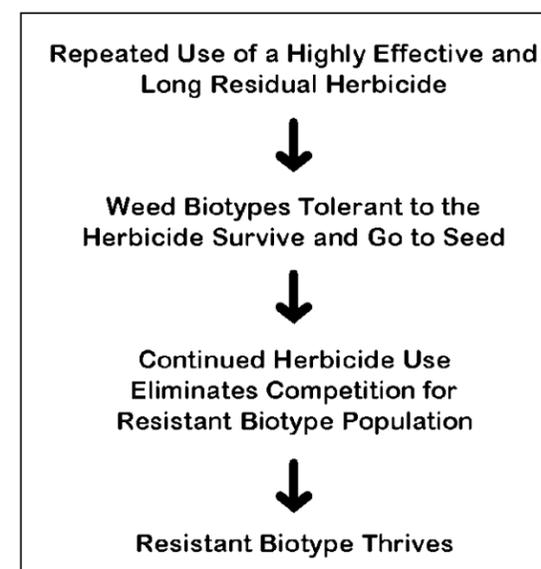
Since the turn of the century, weed management has been accomplished through the use of mechanical, cultural, biological and chemical means. During the 1940's after World War II, extensive use of the herbicide 2,4-D ushered in the age of selective weed control. Over the past fifty years, herbicide use on cropland and other sites has increased dramatically. The selectivity and activity characteristics of herbicides developed over the past several years has been no less dramatic. We now have herbicides that can effectively remove grass or broadleaf weeds from either grass or broadleaf crops. What is even more phenomenal is that they achieve this at fractions of an ounce per acre. While these advances in chemical weed control are quite beneficial economically and environmentally, there is sometimes a price to pay with regard to weed resistance to herbicides.

**Weed resistance** may be defined as the inherent ability of a weed to survive a herbicide application to which the original population was susceptible. In other words, plants of a given specie may look exactly alike, however, some plants may have genetic or physiological traits that make them resistant to a given herbicide or herbicide family. The term **biotype** is often used to describe a group of plants within a species that has biological traits uncommon to the population as a whole. These plants can be weeds, as described earlier, or they may be crops, where herbicide resistance has been achieved through selection or genetic transformation techniques.

Many of today's herbicides are effective enough to eliminate entire populations of a given weed specie infesting a field. When this happens, a competitive advantage can be gained by any biotype of this specie that may not be susceptible to the herbicide. Once you remove the "resistant" biotype's competition, by controlling it with an effective herbicide, the resistant biotype will flourish. This concept of competitive advantage is often referred to as "**selection intensity**". Selection intensity is helped by herbicides with long soil residual where susceptible plants are controlled for months.

## How does herbicide resistance get started?

In situations where highly effective herbicides have been used, particularly year after year at the same location, there is a possibility of weed resistance showing up. Selection for a resistant biotype may or may not happen, depending upon many factors such as cropping sequence, herbicide use intensity, and herbicide selection. There is not a clear explanation as to where the genetic differences in weed biotypes come from, however, herbicide use itself has not been shown to cause this. It is the general assumption that a small percentage (probably less than 1%) of resistant weeds are present in natural populations. If the selection pressure remains intense, and no other herbicides are used, then these small populations will eventually reproduce and thrive. The result of this is a total lack of control over this specie in the subsequent seasons (*Figure 1*).



*Figure 1. Development of Weed Resistance*

## Herbicide activity

Herbicides act at different "sites" within the plant to disrupt normal plant processes. The way in which herbicides accomplish this disruption is often referred to as their "**mode of action**".<sup>1</sup> Most herbicides will fall into one of several modes of action, however, they may have many or a single "**site of action**". In addition, several herbicides may have the same site of action. For some herbicides, however, the exact site or mode of action is still unknown. Herbicides may also have similar chemistry (chemical structure) and therefore similar activity on susceptible plants. Herbicides with these characteristics are often referred to as being in the same **herbicide family**.

If different herbicides acting at the same site of action are used repeatedly, herbicide resistance development may occur quite rapidly. **Herbicide cross-resistance** refers to a weed biotype that has gained tolerance to more than one herbicide. This tolerance can occur with herbicides in the same or different families, and with the same or different site of action.

**Herbicide multiple resistance** refers to weeds that have developed resistance to more than one herbicide, brought about by separate selection processes. For example, when a weed develops resistance to a particular herbicide, another herbicide is used to control it. If

the weed then develops resistance to the second herbicide, then we can say it has multiple resistance.

After considering the factors previously discussed, we can now draw some conclusions regarding herbicide use characteristics that are often associated with weed resistance development.

## Herbicide characteristics conducive to development of weed resistance

- ✓ Herbicides that act on a single site of action.
- ✓ Herbicides that are applied multiple times during the growing season, or that have long soil residual activity, keeping selection pressure high.
- ✓ Herbicides that are used for several consecutive growing seasons.
- ✓ Repeated use of herbicides with the same site of action to the same or different crops.
- ✓ Use of herbicides as the only weed control measure.

Now that we know the circumstances that might result in weed resistance to herbicides, here are some practical approaches for preventing or managing this problem.

## Strategies for avoiding and managing herbicide resistant weeds

- ✓ Employ integrated weed management strategies. Use herbicides only when necessary, and combine their use with mechanical, cultural, or biological methods.
- ✓ Rotate herbicide use, utilizing herbicides with different modes of action.
- ✓ If possible, rotate crops where herbicide rotation is also feasible.
- ✓ When planting herbicide resistant crops, limit herbicide applications and employ other weed control methods.
- ✓ Scout fields regularly to determine if resistant weed populations may be present and also to assess the need for herbicide treatment.
- ✓ Clean tillage and harvesting equipment to help eliminate the spread of resistant species.

<sup>1</sup>Refer to B-6081 Herbicides: How They Work and the Symptoms They Cause