



# Texas Rice

Texas A&M University System  
Agricultural Research and Extension Center  
Beaumont, Texas

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## 30<sup>th</sup> Annual Rice Field Day at the Eagle Lake Station

The 30th Annual Rice Field Day at the Eagle Lake Research Station will be held Tuesday June 29th starting at 4:00 pm. Rice farmers and other industry representatives will gather to learn the latest information in rice research from Texas A&M and USDA scientists.

The Eagle Lake Research Station was established in 1972 through an initial \$45,000 appropriation from the Texas Legislature. This money was supplemented by producers in the form of check-off funds. The Eagle Lake site was established to provide research results applicable to the many soil types and climatic conditions of the western rice belt.

Field Day activities will begin with a tour of the research plots, offered on covered trailers to provide some relief from the hot Texas sun. Speakers will include Dr. Anna McClung giving an update on the development of new rice varieties, with special emphasis on TX 9092 and TX 1123, two new long grain cultivars that may be released for production next year. Dr. Garry McCauley will discuss variety selection based on several years of research comparing the performance of hybrids, CLEARFIELD varieties and traditional standard varieties.



The crew at Eagle Lake, from L to R: Clint Fowler, Garry McCauley, Henry Schmidt Jr., Billy Sanders, Eddie Pavliska, Bennie Schmidt, Coleen Meitzen, and James Raabe.

In 2004, new hybrid and non-hybrid varieties have been added to the study. This study is repeated at Eagle Lake, Beaumont, and Ganado with ratoon production evaluations at all locations. Dr. Mike Chandler will share his research on effective weed control and the associated cost using selected commercially available herbicide programs. Five commercial early season herbicide treatments and six commercial pre-flood herbicide treatments were selected for evaluation. Dr. M.O. Way will discuss his collaborative research with LSU entomologist Dr. Gene Reagan on the Mexican Stem Borer. Assisted by their graduate student, Francis Reay-Jones who is also from LSU, the team is investigating the effect of planting date on stem borer activity and damage, as well as developing economic thresholds for the pest. Dr. Way will also discuss recent regulatory issues

regarding Icon and Orthene. The evening meal and program will follow the field tours and will begin around 6:30 pm. The dinner is courtesy of BU Growers, a limited partnership business specializing in seed rice production, drying & storage, and rice brokering. Based in Bay City, the company has sponsored the Eagle Lake and Beaumont field days since their inception in 1989.

The evening program will feature Dr. Larry Falconer, who will discuss components of the 2002 Farm Bill and the economic impact on the Texas rice industry. There will be an opportunity for producers to ask questions of Dr. Falconer, as well as other scientists conducting research at the Eagle Lake Station.

For those seeking CEU hours, training will be provided in Laws and Regulations toward pesticide license re-certification. One C.E.U. hour in I.P.M. and one hour in the General category will also be given to those on the field tour.

Anyone interested in rice research and production is encouraged to attend. For more information contact Coleen Meitzen at (979)234-3578 or Brandy Morace at (409)752-2741 ext 2227. \*

## From the Editor...



This issue of *Texas Rice* highlights the 30<sup>th</sup> annual Eagle Lake Field Day, which will be held on June 29. At this year's event, several of our Center's researchers will be discussing new varieties and new rice production and management information. Anna McClung will discuss promising rice lines developed through the USDA/TAES rice breeding program, Garry McCauley will present his latest research results on main crop and ratoon crop performance of rice varieties and hybrids, Mike Chandler will provide an update on results from a study involving five early season herbicide treatments and six pre-flood treatments, and Mo Way will give an overview of Mexican stem borer research being conducted with Gene Reagan and Francis Reay-Jones from Louisiana State University. Mo will also give an update on recent efforts aimed at expanding the number of rice insecticides that are available for our Texas rice producers.

The evening program will begin at 6:30 and will feature Larry Falconer, who will give a presentation on the Federal Farm Bill and its impact on the Texas rice industry. Several posters highlighting research programs by all of the Beaumont/Eagle Lake researchers will also be displayed. The evening will end with a dinner courtesy of BU Growers. Please plan on joining us for a great afternoon and evening.

The current issue of *Texas Rice* provides several interesting articles. In the *Farming Rice- a monthly Guide for Texas Growers*, Fred Turner and Mike Jund provide information on nitrogen fertilizer loss in rice soils. They also address how urea additives might help to suppress ammonia volatilization, in the process possibly saving our growers money.

The subsequent article provides a detailed discussion of the Beaumont Center website and how the website has greatly expanded the Center's ability to deliver information to Texas rice producers. The web article is following by an article by Yubin Yang and colleagues, on the newly released Rice Development Advisory Program. RiceDevA, as this program is called, can be used to provide up-to-date information

on the growth and development of a wide range of rice varieties for any rice growing county in Texas. I encourage you to go to the Beaumont Center website and give RiceDevA a try. Since its release six weeks ago, RiceDevA has been accessed over 2,000 times. So far, the comments have been extremely encouraging.

The RiceDevA article is followed by an interesting article on the health benefits associated with frying food in a 100% rice batter. One of the chief benefits that the author points out are a 55% reduction in absorbed fats, compared with using traditional wheat batters. An additional benefit is a 60% reduction in acrylamides produced during frying. Acrylamides have been associated with human cancers and are suspected to be a human health concern.

The final article in this issue of *Texas Rice* communication outreach activities spearheaded by Kelby Boldt, who is the Jefferson County Extension Agent. Please give Kelby a kind word or two for his strong efforts aimed at helping our rice producers.

2004 has so far turned out to be an interesting year. While early season rains have delayed plantings, rice prices have encouraged planting and acreage is expected to exceed 190,000 acres. This is up about 7% or so from last year. Let's hope the rest of the year goes well. Keep on sending us your suggestions.

Sincerely,

A handwritten signature in black ink that reads "L. T. Wilson".

L.T. (Ted) Wilson  
Professor and Center Director  
Jack. B. Wendt Endowed Chair  
for Rice Research

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# Farming Rice

## a monthly guide for Texas growers

*Providing useful and timely information to Texas rice growers, so they may increase productivity and profitability on their farms.*

### Understanding Nitrogen Fertilizer Loss in Rice Soils

Urea applied to the surface of rice soils can be lost to the atmosphere as ammonia gas ( $\text{NH}_3$ ) under certain conditions prior to flood establishment. The urease enzyme found in the soil catalyzes the conversion of urea to ammonium carbonate from which ammonia ( $\text{NH}_3$ ) gas can escape (See site 'A' of N transformation in Fig. 1).

Agrotain is a new urea additive that can inhibit the urease enzyme and retard ammonia N volatilization under certain field conditions. Tests to evaluate Agrotain's ability to increase rice yield through suppression of ammonia volatilization from urea are still being conducted. Currently available data indicate that significant ammonia volatilization does not always occur in Texas rice fields.

Conditions which encourage ammonia volatilization and create a need for Agrotain treated urea are:

- Preflood urea applied to sandy soil, or clay soils with pH greater than 7, when urea cannot be washed into the soil with floodwater within 3 days.
- Preflood N rates applied above 50 lbs N/A (i.e. 108 lbs urea/A).
- Urea applied to wet soils.
- Urea applied for the ratoon crop, and does not contact soil because of crop residue.

Conditions which restrict significant amounts of ammonia volatilization from urea and eliminate the need for Agrotain treatment are:

- Soil pH less than 6.
- Urea mechanically incorporated into the soil or carried into the soil by floodwater within 3 days after application.
- Application of urea near the PD growth stage when rice roots are in the floodwater and absorb the majority of the urea within 5 days.

Cost for treating urea with Agrotain is around \$2.25/per 100 lbs of urea (i.e., 46 lbs N). Agrotain treated urea is stable in storage for about 6 weeks. After application to the field, Agrotain suppresses ammonia volatilization for approximately 2 weeks, which is sufficiently long to 'wash' the urea into the soil with floodwater.

How is Agrotain's action different from N-Serve, another urea additive? Agrotain can inhibit ammonia volatilization from urea for about 2 weeks under certain conditions. N-Serve can suppress "nitrification", the conversion of ammonium to nitrate, which is eventually converted to unavailable nitrogen gas, by special bacteria in flooded rice soils (See site 'B' in the N transformation diagram). N-serve has not been consistently economical in rice production. Placing urea below the soil surface suppresses processes 'A' and 'B' while enhancing N uptake (process 'C'). Results of this year's Agrotain evaluations on rice will be available in the fall of 2004.\*

Article by Dr. Fred Turner and Mike Jund, with support provided by Cynthia Tribble.

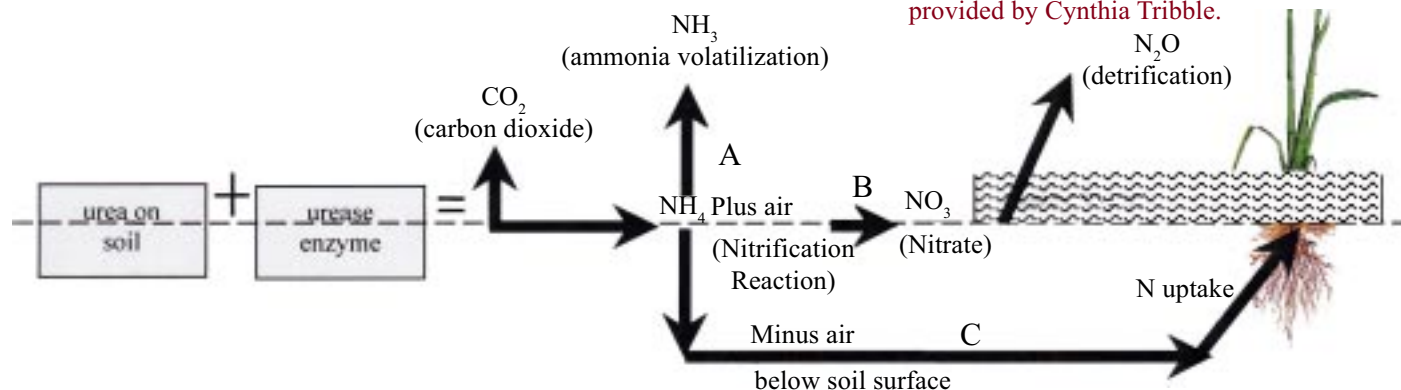


Fig. 1. Transformation of urea applied to rice soil prior to flush or flood irrigation.

# Beaumont Center Website: Delivering Information in the 21<sup>st</sup> Century

March 10, 2003 marked the release of the Beaumont Center website. This event followed a year of planning and development, involving a large number of individuals at the Center. The goal in developing a web site was to more effectively provide information to the Center's three major clientele groups: rice producers, scientists, and students. This article provides a brief overview of different ways the Beaumont Center delivers information and highlights the information and features that are available through the Beaumont Center website.

## Delivering Research Information to our Clientele

Historically, the Center has provided information on research findings through "turn-row" meetings, field days, reports, publications, news releases, and newsletters. All of these are important forms of communications and each has its strong points and limitations. Turn-row meetings and field days do an excellent job of demonstrating the latest varieties and improved methods of production and management. However, these meetings typically occur only a couple of times a year and the information that is provided through the presentations, handouts, and discussions reaches a fairly small audience. Reports and publications can be extremely valuable and will continue to be a major form of information delivery. However, they are increasingly costly to print and it is difficult to get them out on a timely basis. A well developed report can be worth its weight in gold. However, nothing is more frustrating for both the scientists and staff who develop the reports and publications, and the growers who use the information, than information that is delivered too late to use.

News releases, through newspapers, radio, and television, can reach a fairly wide audience. News-



papers columns, such as the one that was recently started in the Beaumont Enterprise by the Jefferson County Agriculture Committee, is developing a loyal following that is aimed at reaching beyond conventional agricultural audiences. I am hopeful that this effort, which was spearheaded by Kelby Boldt, our local County Extension Agent, and by local leaders in our agriculture community, will continue to be a

success and provide an alternative means to deliver information about agriculture to our local community.

Radio and television can reach a wide audience, but with the exception of horticultural and gardening radio talk shows, they focus primarily on providing a snapshot about current events and accomplishments, and rarely allow for detailed coverage of research accomplishments.

Newsletters are one of the best ways the Beaumont Center uses to delivering information to our growers, scientists, students, administrators, and legislators. However, newsletters are relatively expensive to print, and when their delivery is restricted to conventional mailings, they reach only a fairly limited number of individuals.

As the population of Texas has grown, so have the methods that are used to delivery information about these tools. One of the most visible aspects of this change has been the increasing role that computers now play in all aspects of business, research, and education. Not only have computers become commonplace in our society, so has the means to exchange information between computers. The internet allows near instantaneous exchange between computers across the state, country, and world.

Nearly a decade ago, 37 million people in the U.S. over the age of 16 were reported to have access to the internet (The Commerce Net/Nielson Internet Demographic Survey, 1996). Today, that figures is reported

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## Beaumont Website continued...

to exceed 120 million and all indications are that computers will soon be as common in businesses, schools, and households, as the ever-present phone. A recent survey conducted in Denver, Colorado, reported that even for those who do not own computer, 59 % have access to the internet (Making Connections-Denver, <http://www.makingconnectionsdenver.org/Common/Neighborhoods/Articles/index.asp?id=190> ). One way or another, almost every person in the U.S. has the ability to access computers and the information they can provide.

The near ubiquitous availability of computers and high-speed internet access has had a tremendous impact on how information is now delivered. The rapid boom in e-commerce is but one example of how the internet has changed how business and individuals function in today's society.

In most cases, the internet does not provide new information to society, instead it provides information more rapidly, often in a less expensive form, and often in an easier to use form. For example, while the *Rice Production Guidelines* can take several weeks to print and then deliver, it can be posted on the web and made available prior to printing and mailing, saving in some cases over a month's time in getting the information out. Also, while only hundreds of printed copies of the *Rice Production Guidelines* are made available each year, over 4,000 electronic copies were downloaded during the first two weeks following its web-posting.

Web-based delivery of publications can provide an extremely valuable tool that is not available with conventional publications. How often have you found yourself half way through an article (or book), wanting to go back to double check something you had read? How often have you tried to do this and then given up and instead resumed your reading where you left off? Downloaded pdf articles can be searched directly from your computer, using software such as Adobe Acrobat Reader, which is free and readily available. Html files can similarly be searched using your favorite web browser.

Web-based delivery of publications can also provide a lasting copy of the publication. How often do you find yourself looking for that dog-eared copy of a printed report or printed publication? And, if the report or publication is particularly useful, each time you find where you left it, it becomes progressively more and more beat up the more you use it. In contrast, publications that you download from the internet can literally last for ever, and as notebook computers become less and less expensive and as the quality of their screens continue to improve, you can increasingly use them in more places around the house or yard, as you would a newspaper or book. Although notebook computers are still not quite up to speed in areas with bright lights, as is readily apparent to me as I type this article sitting in my backyard on a Sunday afternoon, my guess is that we will soon have notebook computers with screens that will allow us to read anywhere we can read a book.

Web-based delivery of information can also be much less expensive. While the 9 annual issues of the 425 printed copies of *Texas Rice* cost about \$11,000 to produce and mail, which is almost \$3.00 per copy, the 2,000 to 3,000 copies of each issue of *Texas Rice* that are downloaded from the Beaumont Center website, do not need to be printed and the cost of delivery is very inexpensive. And, while it takes several days to print and mail each issue of *Texas Rice*, the web-posting and email notification takes minutes, making them almost immediately available following posting.

Here are some rough figures on the relative cost of delivering information through conventional publications versus the cost of delivering through the

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## Beaumont Website continued...

internet. Again, using the *Rice Production Guidelines* as an example, its assembly involved several faculty and staff at the Beaumont Center. Mo Way and Cynthia Tribble spent the greatest amount of time in coordinating, reviewing, and editing the sections. However, most of our scientists, and several of their staff also spent several days to a week or more each updating their individual sections to make sure they were up-to-date. Collectively, I would guess that at least a half a person year of work is required to develop each new addition of the *Rice Production Guidelines*. This means that a half a person year of work provides a publication that reaches 1200 users via printed copy. How does this compare to the cost (or value) of web-delivery? On March 29 of this year, the *Rice Production Guidelines* were posted on the Beaumont website. Since then, 4,119 copies have been downloaded from this site, with an additional 600 plus copies download from the AgFax website operated by Owen Taylor out of Brandon, Missouri. Most of the copies were downloaded within 2 weeks of the web-posting. Creating the web-directory and the necessary links to allow the *Rice Production Guidelines* to be posted on the Beaumont website took a couple of hours of work. Writing and editing the notice of the web-release took another hour or so of time. That means that about three hours of work allowed the distribution of the Rice Production Guidelines to reach an additional 4 times the number of people that were originally reached through printed copies alone. With the Beaumont website requiring about one man-year of labor to maintain and expand, and the *Rice Production Guidelines* representing only about 4% of files that are downloaded from the Beaumont Center website and only about 1/3<sup>rd</sup> of 1% off all Beaumont Center web accesses, this suggests that delivery of information through the Center web site is extremely cost effective. Not a bad return on investments!

### Highlight of Information and Features on the Beaumont Center Website

During the 15 months since the Beaumont Center website came online, new features continue to be added

and old features are periodically improved. The website is designed around pull-down menus shown under the banner across the top of the web pages, and pop-up items and links along the left margin of each web page. The eight menu items across the main web page are present in almost every web page, allowing users to rapidly navigate through different parts of the web site.

Included in the menu across each page is general information about the Center, information on the Center's *Research, Teaching, Extension, and Outreach* programs, an overview of *Services* provides to researchers who are located at Beaumont, Eagle Lake, and at the College Station campus, *Personnel Information* that provides

quick access to virtually anyone at the Beaumont Center and at our County Extension offices across the Texas Rice belt, and a comprehensive electronic library (*elibrary*) containing 11 categories of downloadable information.

The pop-up items and links along the left margin of each web page vary depending on the particular web page. The pop-up items on the



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main web page provide links to the Texas A&M program, links to information from the US Rice Producers Associations and the USA Rice Federation, a Calendar of Events, access to Weather Data, a link to other web sites containing information on rice, a subscription link for *Texas Rice*, and links to new programs, such as the Rice Development Advisory.

The right side of the Center's main web page is used to highlight important rice meetings and different parts of the web site. A translation feature that targets international guests can be accessed directly underneath the photograph in the Center of website's main page. This feature allows a large part of the website to be translated into one of seven languages (Spanish, French, German, Italian, Portuguese, Japa-

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## Beaumont Website continued...

nese, and Chinese). Although the translator does not work on words that are “printed” on menu items and pictures, it does provide international visitors with an ability to navigate through much of our website.

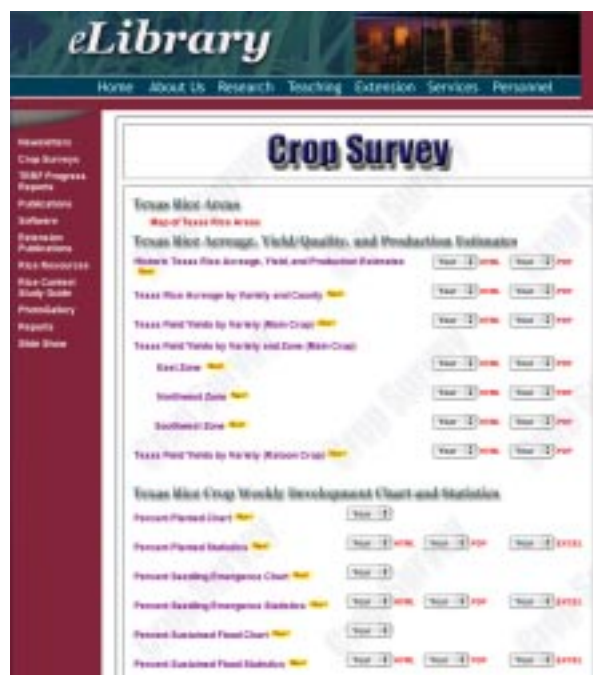
The *elibrary* deserves special mention since it is the most frequently accessed section of the web site. As mentioned earlier, it includes 11 menu items: *Newsletter*, *Crop Survey*, *TRRF Progress Reports*, *Publications*, *Software*, *Extension Publications*, *Rice Resources*, *Rice Study Contest Guide*, *Photo Gallery*, *Reports*, and *Slide Show*.

Downloadable copies of the latest issue of *Texas Rice* and all previous issues can be obtained by going to the *Newsletter* menu item.

Up-to-date crop survey results can be obtained from *Crop Survey*. Dr. Jim Stansel developed the rice crop survey several years ago. We have expanded the number of download formats and have made the information easily obtainable by anyone with a computer. Dr. Stansel remains active in the survey and during each of the previous three years he has obtained a grant from the Texas Rice Research Foundation (TRRF) to augment the survey effort. The crop surveys provide detailed information on historic rice acreage and yield (both main crop and ratoon), by variety and averaged across varieties, and production estimates for each Texas production area. Weekly crop development statistics allow the user to determine how well their fields are progressing relative to other fields in their production area and in other production areas.

Crop survey results are available in html, pdf, and Excel formats. For users who wish to conduct analyses using the data, the Excel format is the best way to download the files.

The *TRRF Progress Reports* and the *Reports* menu items are under development and currently contain reports by Drs. Fred Turner and Mo Way. A goal is to have all of the current reports available via the website by February 2005. The *Publications* menu item pro-



vides a list of scientific papers produced by each of the Beaumont Center scientists. A long-term goal is to digitize each publication to make it available to website visitors. The *Extension Publications* menu item provides a link to the last three issues of the *Rice Production Guidelines*. The 2004 issue of this publication is the single most downloaded file on the Beaumont Center’s entire web site. The *Rice Resources* menu item provides pdf copies of recent publications from the Louisiana Rice Research and Extension Center

at Crowley. A major goal of both the Beaumont Center and the Crowley Center is to continue to promote cooperation and exchange of information.

The *Software* menu item allows visitors to download copies of programs ranging from *Rice Weed-ID* and the *Rice Weed Control Advisor*, to programs that aid in cotton scouting. Several rice programs are targeted for entry over the next several years.

The *Rice Study Contest Guide* provides useful study information for high school agriculture classes. A pleasant surprise has been the high rate at which this information has been downloaded. The *Photo Gallery* and *Slide Show* are under development with a goal to steadily increase their content.

### Summary

The Beaumont Center web site continues to grow at a rapid pace. The next issue of *Texas Rice* will include an article that will provide an overview of who uses the Beaumont Center website, statistics on the most visited parts of the website, and an overview of the amount and type of information downloaded by visitors. If you would like to see specific features added to the website, please contact Ted Wilson at [lt-wilson@aesrg.tamu.edu](mailto:lt-wilson@aesrg.tamu.edu).

Article by L. T. (Ted) Wilson, Yubin Yang, Peter Lu, Jay Cockrell, Jim Medley, Tammy Tindel, Jenny Wang, Brandy Morace and Janice Delgado.

# The Rice Development Advisory Program - *Helping Farmers Predict Crop Development*

In 1976, Dr. Jim Stansel developed the concept, methodology, and original data for forecasting rice development based on useable heat units. In 1986, Jack Vawter (TAMUS-Eagle Lake) wrote a DOS-based computer program (“DD50”) based on Dr. Stansel’s concept and methodology.

The DD50 program used current daily maximum and minimum air temperature and historic temperature data to calculate useable heat units for each day. Historic air temperature data were used for predicting dates where current temperature data are not available. These heat units were accumulated from seedling emergence and used to predict various rice crop growth stages.

These predictions were then used to make recommendations for scheduling production practices. DD50 had since been modified and updated by various authors (Jack Vawter, James Woodard, Kuo-Lane Chen, W.H. Alford, and Jim Stansel).

## Web-Based Rice Development Advisory (RiceDevA)

There were a number of limitations regarding the DOS-based DD50: (1) access to weather data for only two weather stations (Eagle Lake, and Beaumont), (2) need to manually input up-to-date weather data, (3) limited user interface, (4) accessible to only a small group of users, and (5) need to update and send out new copies of the program every year. In December of 2003, the Beaumont Center Director, Dr. Ted Wilson, started a project to develop a web-based program called Rice Development Advisory (RiceDevA) to replace DD50. RiceDevA is a complete rewrite of the DOS-based program. It provides an improved user interface, and advanced options for creating, running, and displaying multiple field growth forecasts for different rice varieties, planting/emergence dates, and counties.

### Major Features

RiceDevA can provide growth forecasts and advisories for 21 rice counties in Texas (Figure 1). It can forecast rice growth stages for multiple varieties, dif-



Figure 1

ferent planting dates (Figure 2), and different rice counties. It allows users to create, view, and edit multiple field profiles (Figure 3). It also allows users to run multiple field profiles at the same time and display and print results for multiple field profiles (Figures 4 and 5).

RiceDevA allows users to choose weather stations in any Texas rice producing county and choose weather data for a specific year or historic averages for a particular station in the county. RiceDevA also provides interfaces for user to add, view, and edit their own weather data, and allows user to view and download county weather data.

### Crop Forecasting

RiceDevA uses the same simple field information that DD50 previously used to forecast development. Production data include rice variety, planting date, and 10% and 90% seedling emergence date. Additional information that DD50 did not use includes weather station data and year or historic average for the station.

### Interface Window

The top part of RiceDevA’s window displays links to the Texas A&M University Beaumont Research & Extension Center web site (Home, Research, Teaching, Extension, Outreach, Services, Personnel, and eLibrary) (Figure 1). The left side of the window displays links to the major features of the Rice Development Advisory (About Rice Advisory, Login, New Account, Account Info, Variety Info, Field Forecasts,

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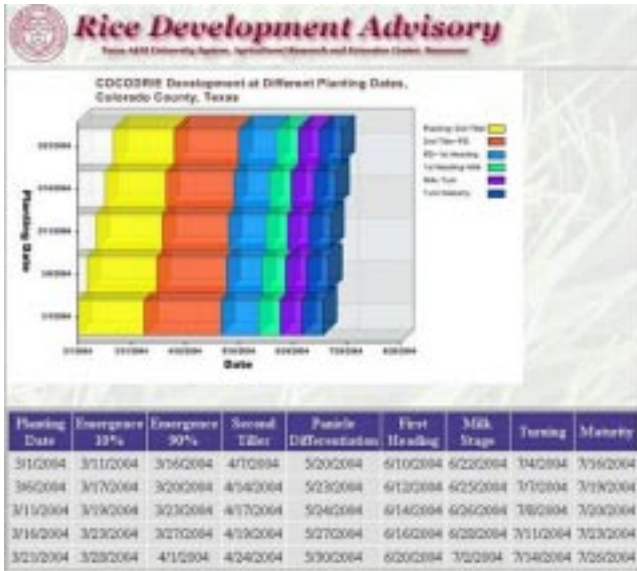


Figure 2

County Forecasts, and Weather Data). The remaining part of the window allows users to input, edit and view data or display results.

**Feature Access**

A user can access features of the Rice Development Advisory by clicking a link on the left side menu and making appropriate selections.

*New Account Creation.* To create a new account, click the “New Account” link, fill in the appropriate information, and click the “Submit” button. Once your account is created, you are automatically logged in and you will be presented with more feature options on the left side menu.

*Field Profile Creation.* A field profile is a collection of production and weather data needed to forecast rice plant growth stages. Production data include rice variety, planting date, 10% emergence date, and 90% emergence date. Weather data include weather station and year or historic average for the station. A user can create a field profile by clicking the “Create Profile” button under the “Field Forecasts” menu on the left side and making the appropriate selection for the production and weather data (Figure 3). Only users who have an account with RiceDevA can save the profile and view/edit/delete existing profiles. A field profile is owned by a specific user and is accessible only by that specific user.

**Menu Descriptions**

Menus to access RiceDevA features are displayed on the left side of the RiceDevA window (Figure 1). *Account Info* menu displays information about a user who has registered with RiceDevA (user name, user ID, email, etc.) The *New Account* menu allows a user to create a new account. A registered user (by creating a new account) will have access to advanced features of the RiceDevA. The *Variety Info* menu displays information about all varieties which are currently in the system. The information includes heat units to different crop stages (2nd tiller, panicle differentiation, first heading, milk stage, panicle turning, and grain maturity) and disease resistance (rice blast, sheath blight, and straight head). Varieties currently in the database include Cypress, Cocodrie, Francis, Jefferson, Wells, Dixiebelle, Gulfmont, XL8, CL161, Saber, Cheniere, XL7 and Bengal. The *Field Forecasts* menu provides growth forecasts for single or multiple field profiles for the current user. The *Create Profile* submenu allows users to create a new field profile, the *Edit Profile* submenu allows a registered user to edit his/her existing field profile(s), and the *Forecast* submenu allows a registered user to forecast rice crop growth for single or multiple field profiles. The *County Forecasts* menu allows users to forecast rice crop growth for different varieties, planting dates, and counties. The *Varieties* submenu provides growth forecasts for single or multiple rice varieties, the *Planting Dates* submenu provides growth forecasts for single or multiple planting dates, and the *Counties* submenu provides growth forecasts for single or multiple counties.



Figure 3



Figure 4

The *Weather Data* menu gives users background information about weather data and options for adding user weather data and viewing county weather data. The *Information* submenu provides background information about weather data sources and usage, the *Add User Data* submenu allows a registered user to add user specific weather data for new or existing user stations, the *View User Data* submenu allows a registered user to view his/her weather data, and the *View County Data* submenu allows any users to view weather data for 21 rice producing counties in Texas.

### Future Production and Management Tools

RiceDevA uses daily max and min temperatures to forecast rice crop growth stages based on useable heat units per day. It can not predict rice crop yields, and can not account for changes in crop development due to other environmental factors and management

practices (e.g. rainfall, solar radiation, soil type, fertilizer application, water management, planting density, row spacing, etc).

We are currently in the process of developing a web version of our Rice Cultivar Selection program (RicePSM). The RicePSM is a physiologically based program that has been proven to accurately predicate rice crop growth stages and crop yields. It accounts for changes in crop development due to temperatures, rainfall, solar radiation, soil type, fertilizer application, water management, planting density, row spacing, and other factors. The web-based RicePSM, which is scheduled for release in spring 2006, will give more options to users to manage and predict their rice crops.

As we continue to accumulate knowledge and understanding of the rice cropping system through research, we are also realizing the increasing importance of extracting and integrate diverse knowledge, in agronomy, physiology, ecology, entomology, and economics, into a system that is user friendly and easily accessible. Such an integrated system would greatly help rice producers and consultants in managing their crop production, and help maximize the transfer of knowledge from research to extension, and production. RiceDevA is our first step in this direction.

Suggestions and input from users is highly encouraged. Please forward your comments to Yubin Yang at [yyang@aesrg.tamu.edu](mailto:yyang@aesrg.tamu.edu) or Ted Wilson at [lt-wilson@aesrg.tamu.edu](mailto:lt-wilson@aesrg.tamu.edu). \*

Article by Yubin Yang, Ted Wilson, Peter Lu, Jenny Wang, Jack Vawter and Jim Stansel.

## Rice Producer Groups Prepare Joint Testimony for Congress

USRPA - The House Agriculture Committee announced this week that it will hold a hearing on Wednesday, June 16 to Review Iraqi Agriculture: From Oil for Food to the Future of Iraqi Production Agriculture and Trade.

The US Rice Producers Association and the USA Rice Federation are preparing joint testimony for the hearing to explain the importance of the Iraqi market for US rice producers in the past, and to urge the Congress and the Administration to assist the industry to reestablish this key market as soon as possible. \*

Check for check bags on recently emerged rice  
Check for fall armyworm from emergence to maturity  
(For rice water weed control (if justified) apply Ison 6:2FS as a seed treatment, or Dursin 3L or Mustang<sup>®</sup> MAX rice pre-plant, or Karate<sup>®</sup> Z seven days before to five days after flood.)

Cautionary note: This program uses only air temperature to predict rice growth stages. Any other stresses may alter the actual development of the rice plant.

Date	Event
(1) 4/23/2004 - 5/13/2004	Only apply broadcast herbicides after peak tillering and up to 7 days prior to PD
(2) 5/04/2004 - 6/3/2004	Panicle differentiation (If application for non-hybrid only, start checking for sheath blight and stem borers)
(3) 6/7/2004 - 6/17/2004	First blast fungicide application
(4) 6/16/2004 - 6/23/2004	Date field reaches 15% heading
(5) 6/16/2004 - 6/28/2004	Start checking for rice tick bugs at least once a week from 50% heading to harvest
(6) 6/20/2004 - 7/1/2004	Second blast fungicide application
(7) 7/9/2004 - 7/19/2004	Drain alert
(8) 7/19/2004 - 7/29/2004	Approximate harvest date (20% grain moisture)
3/1/2004 - 5/16/2004	EAGLE LAKE RESEARCH STATION Real Weather Data
5/7/2004 - 7/29/2004	EAGLE LAKE RESEARCH STATION Historic Average Weather Data

Figure 5

## Rice Offers a Healthier Way to “Batter Up”

Fillets of fish and chicken, whole mushrooms and onions—all seem more savory after being dipped in a seasoned flour mixture and then fried to a golden brown. However, many consumers can only dream of enjoying such fried foods, because these treats contain high levels of fat and may pose other health risks. But this could soon change, as scientists with the Agricultural Research Service have found a healthier batter to coat these favorite foods.

USDA/ARS chemist Dr. Fred F. Shih and colleagues examined a variety of batters—made with long-grain rice, waxy rice, wheat or corn—to see which flour type would take up the least amount of oil. Their findings? Batters made with long-grain rice flour and small amounts of other specially modified rice ingredients absorbed about 55 percent less oil than the traditional wheat batter. Rice flour has unique properties that resist oil absorption.

The researchers, located in the Food Processing and Sensory Quality Research Unit of the ARS Southern Regional Research Center in New Orleans, La., were also interested in how much acrylamide the batters produced during frying. A chemical found in many cooked foods, acrylamide forms in the presence of high temperatures and specific interactions between protein components and carbohydrates. While there are no guidelines yet on safe levels of acrylamide in foods, excessive levels of the chemical may be a cause of concern, according to Shih.

Shih found that the batter formulated with long-grain rice flour and other modified rice ingredients again rated best, containing 60 percent less acrylamide than the wheat-based one. But acrylamide levels for all the researched batters were still relatively low when compared to levels in other fried foods, like potato chips. In addition to being low in acrylamide and oil uptake, the new 100-percent rice batter is also gluten-free.

ARS has a patent on the process to create the batter, and they are currently negotiating with private companies to commercialize the product. Hopefully, within the next few years, health-conscious consumers will be able to find rice battered items on their grocery store shelves. \*

Erin Peabody, ARS News Service, (301) 504-1624



County agents wear many hats, as Jefferson County CEA Kelby Boldt can certainly attest to. Among other responsibilities, he divides his time between rice fields, farmer meetings and media outreach efforts.

## Getting the News Out

Information dissemination is the end result in all successful research efforts. All the facts and figures in the world are not worth a hill of beans unless you get the information out to the people who need it. Jefferson County Extension Agent Kelby Boldt has been producing the **Texas Rice Update Production Newsletter** for the past 2 years, and has made great progress in providing farm-

ers with critical information regarding rice production. The newsletter goes out 4-5 times a year, and carries the latest information on pest outbreaks, chemical regulations and production information. Boldt seeks input from researchers and Extension specialist and prepares the newsletter from his Jefferson County office, but then sends it out to all the agents in rice growing counties, so that they may add information specific to their region. If you are interested in receiving the newsletter contact your local CEA or call Kelby Boldt at 409-835-8461.

Another way to help farmers is to get information to the public about the importance of agriculture to the state economy and local communities. They in turn can influence politicians to make the right choices that will help and not hinder agricultural endeavors. To this end, the Jefferson County Ag Task Force, chaired by Kelby Boldt, initiated the **Agricultural Weekly**, a regular Thursday column that appears in the *Beaumont Enterprise*. The committee takes turns writing articles for the column that cover a wide variety of topics, from production information to promotion of locally produced agricultural commodities. The column has been running since October 2003, and continues to have strong support of the sponsors, whose paid advertising makes the weekly column possible.

The Task Force has also initiated an agricultural news segment for the Beaumont CBS affiliate, KFDM Ch 6. The regular Tuesday segment serves the same purpose as the newspaper column, but reaches a greater audience through the television media. \*

## 2004 Rice Research Field Days

Make plans to attend! Field days provide an excellent chance for farmers to get up to date on the latest research information effecting their livelihood. Meals are provided for all field day participants

### Texas A&M, Eagle Lake

Tuesday, June 29<sup>th</sup>

4 pm – 7:30 pm

contact: 979-234-3578

### LSU AgCenter, Crowley

Thursday, July 1<sup>st</sup>

7:30 am – 1:30 pm

contact: 337-788-7547

### RiceTec, Alvin

Tuesday, July 6<sup>th</sup>

11:30 am – 3:00 pm

contact: 281-393-3502

### Garrett Farms, Danbury

Tuesday, July 6<sup>th</sup>

3 pm – 7:30 pm

contact: 979-922-8405

### Texas A&M, Beaumont

Thursday, July 8<sup>th</sup>

8 am – 3 pm

contact: 409-752-2741 ext. 2227

Professor and Center Director: L.T. (Ted) Wilson

[lt-wilson@aesrg.tamu.edu](mailto:lt-wilson@aesrg.tamu.edu)

Ag Communications Specialist: Jay Cockrell

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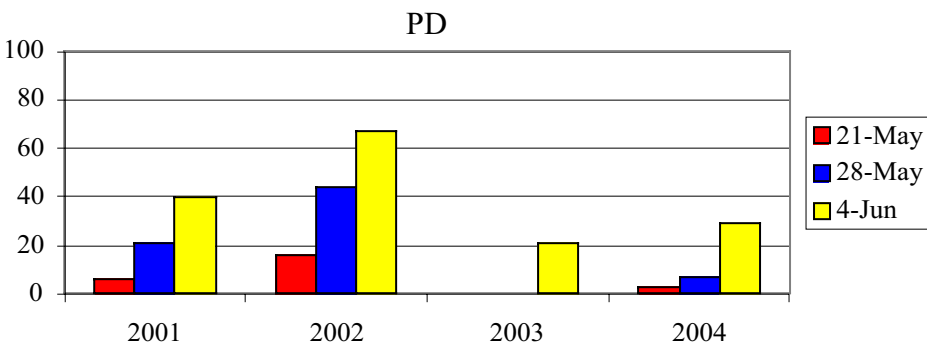
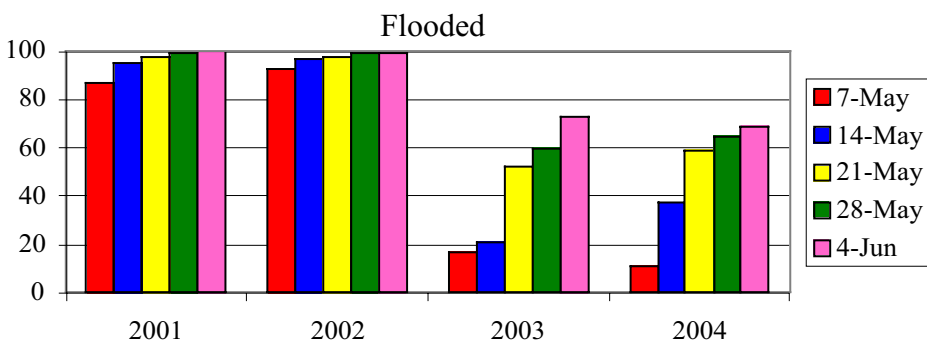
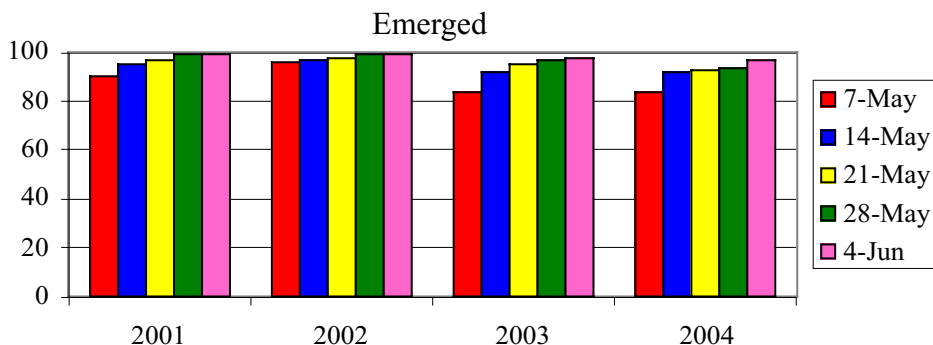
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## Rice Crop Update

As of June 4th, 97% of the 2004 Texas rice acreage was planted. This year's acreage will amount to 192,626 acres, as compared to 178,028 acres in 2003. 95% of the rice is reported as emerged, with nearly 70% flooded and just under 30% at PD.



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