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LOUISIANA RICE NOTES

Dr. Dustin Harrell

February 23, 2017 **No. 2017-01**

Poor Seed Germination an Issue to Start 2017 Season

The poor growing conditions and flooding that plagued the Louisiana rice industry last year seems to be rearing it's ugly head again this year. Much of the certified seed, which was grown in the state last year to provide seed rice this year, has a lower than normal germination. The germination percentage is determined by the Louisiana Department of Agriculture (LDAF) Seed Certification Program on a lot by lot basis. LDAF has found lots of seed that range from over 80% germination, which is acceptable, to many lots in the 60 to 79% range, which is normally unacceptable. Under certification standards, seed lots with lower than 80% germination are not certified by LDAF; however, since there is an abundance of low germ seed and less total seed avaliable this year, LDAF has issued an emergency rule which lowers the minimum germinationm to 60% for 120 days. More on the emergency rule exemption can be found here: http://www.ldaf.state.la.us/news/ldaf-seed-lab-discovery-prevents-significant-rice-losses/.

The low germ seed is not variety specific. Lots of the low germ seed have been found across all rice varieties. The problem stems from the poor enviornmental conditions from which the seed was grown in last year. Not only did the floods cause an estimated 68.9 million dollar loss to the Louisiana rice indusry last year, it seems that the effects are hitting us again this year!

Seeding rates will have to be adjusted to account for the lower germination rate. In other words, you will have to increase your seeding rate if you are using seed with a lower than normal germination in order to achieve an equivalent plant population. Higher seeding rates increase the planting cost per acre. Speak with your seed dealer about the germination percentage of your seed and about any potential compensation or reduced pricing for using low germ seed.

You should also keep in mind that low germ seed generally goes hand in hand with lower seedling vigor. Therefore, planting seed with a higher germination would be preffered to planting seed with a lower germ when planting early in the season when soils are typically cooler.

How to Correctly Adjust Seeding Rates for Rice Seed with Low Germination

The seeeding rate must be increased when planting rice seed with lower than normal germination. The best way to do this is to calculate the ammount of viable seed you normally plant and plant the low germ seed at a rate that will result in an equivalent ammount of viable seed.

You will need to know three piecies of information to make the calcualtion:

1) The mean germination percentage of typical certified seed.
2) The germination percentage of your seed
3) Your normal seeding rate in pounds per acre

The first thing you must keep in mind is that certified rice seed has a germination percentage that normally falls in the 85 to 95% range. Therefore, we can say that the certified rice seed typically has an average germination percentage of 90%. Talk to your seed dealer to find out the germination of your lot of seed. Once you have the germination percentage of your seed you can use the following calculation to determine your adjusted seeding rate:

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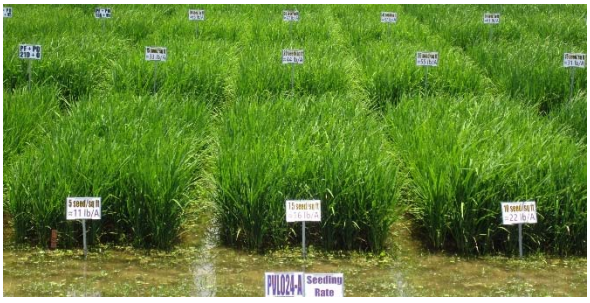
$$Pounds\ of\ low\ germ\ seed\ needed\ per\ acre = \frac{(normal\ seeding\ rate * .90)}{germination\ of\ low\ germ\ seed\ as\ a\ decimal}$$

Example: You normally plant 60 pounds of seed per acre. You have one lot of seed that has a guaranteed germination of 65%. The ammount of seed that you would need to plant an equivalent ammount of viable seed would be calculated by:

$$\frac{60 * .90}{0.65} = 83\ lb\ seed/A$$

Caution: One common mistake that many tend to make when calculating an adjusted seeding rate is to simply increase the seeding rate by a percentage equil to the difference in normal germ seed and the reduced seed germ. *This logic is flawed because the low germ seed is not equivalent to high germ seed in terms of how many of the seed will germinate on a weight basis!* In our example, many would believe that simply increasing the 65% germ by 25% would be adequate. If calcualted this way, (1.25 * 60 = 75 lb seed/A) you would not be planting on an equivalent basis. In fact, from our example, this would result in approximately 8 pounds less seed per acre or 4.8 pounds less of viable seed per acre. Don't make this mistake.



Consider AV-1011 Where Blackbirds are a Problem

Pedatation of rice seed by birds can be devastating to a planted rice field in a normal year. In a year when you may have to plant a lower germination seed, the effect of bird predation may potentially have an even more dramatic effect. If you have had a bird predation problem in the past and/or if you are planting lower than normal germ seed, you may want to consider using AV-1011 to protect your investment.

AV-1011™ is a bird repellent made by Arkion Life Sciences. It is a liquid seed treatment that can be applied to rice seed at your local seed distributor. The active ingredient in AV-1011 is anthraquinone. The chemical is non-lethal to the birds and is actually found in 94 known plant species. When a bird eats a treated seed, it gives them digestive distress, and this is what deters them from eating more seed.

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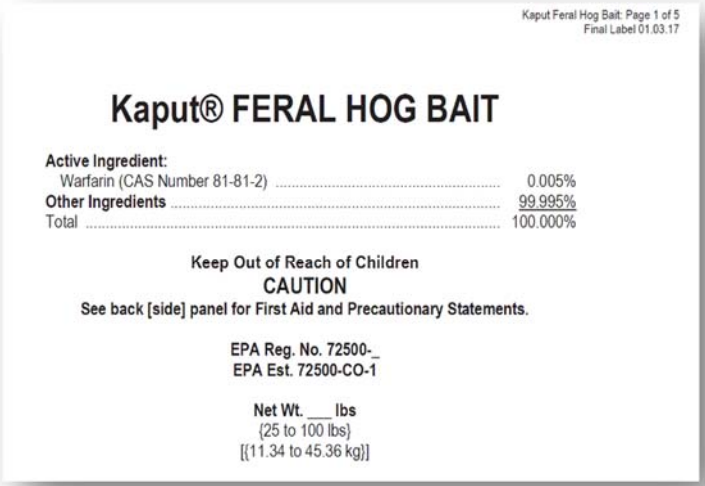
The suggested retail cost of AV-1011 in 2016 was $204.50 per gallon. AV-1011 is recommended at 18.29 fluid ounces per 100 pounds of seed. Therefore, if you are planting at a 25, 50, or 90 pound per acre seeding rate, it will cost you approximately $7.30, $14.61, or 26.29, respectively. Prices may be different in 2017, contact your seed distributor for more exact pricing. The AV-1011 label, safety data sheet (SDS), and 2016 suggested price sheet are posted on the AgCenter's rice webpage and can be accessed directly with the following hyperlinks: label, SDS, price sheet.

Kaput Feral Hog Lure Approved by EPA



Kaput Feral Hog Bait: Page 1 of 5
Final Label 01.03.17

Kaput® FERAL HOG BAIT

Active Ingredient:	
Warfarin (CAS Number 81-81-2)	0.005%
Other Ingredients	99.995%
Total	100.000%

Keep Out of Reach of Children
CAUTION
See back [side] panel for First Aid and Precautionary Statements.

EPA Reg. No. 72500-_
EPA Est. 72500-CO-1

Net Wt. ___ lbs
{25 to 100 lbs}
[{11.34 to 45.36 kg}]

The Kaput feral hog bait was approved by the Federal EPA on January 3 of this year. This is the first time that a chemical has been approved that will help control the feral hog population. The product will still have to be approved by LDAF, which approves all pesticides sold and distributed in Louisiana, prior to its availability. The Texas Department of Agriculture has approved the Kaput feral hog bait for use in Texas (https://www.texasagriculture.gov/RegulatoryPrograms/FeralHogPesticide.aspx). However, it is unlawful to purchase the bait in Texas for use in Louisiana. Speaking with the chemical company that manufacturers the hog bait earlier this year, I found out that Louisiana is the second state that they hope to get a state registration for the hog bait. However, they have not applied for a Louisiana registration yet.

The Kaput feral hog bait contains the active ingredient warfarin, which is a blood thinner. Hogs are sensitive to warfarin, making it lethal to the animals at very low dosages. Many animals and livestock are not as sensitive to the drug and it would require a much higher dose to affect other animals in the same way. Questions still remain on how the drug would affect the Louisiana Black Bear or secondary predators which may eat the dead hogs. This has caused this bait to be controversial in Louisiana.

The Kaput feral hog bait label states that the bait must be used in hog feeders with 10 – 15 pound lids that would limit the access to the bait from other animals which would not be able to lift the heavy lids. In addition, the hogs must be conditioned to feed from the feeders for approximately 2 weeks prior to using Kaput. After using Kaput feral hog bait, hog carcasses should be scouted for and buried.

Burndown Plant Back Restrictions for 2017

Hopefully, by now you have decided on a burndown herbicide strategy. If not, you need to be sure to keep in mind the plant back restrictions when using certain herbicides. For example, if you plan to plant on March 15, you would not be able to use a Valor + glyphosate burndown combination now. A list of common burndown combinations and plant

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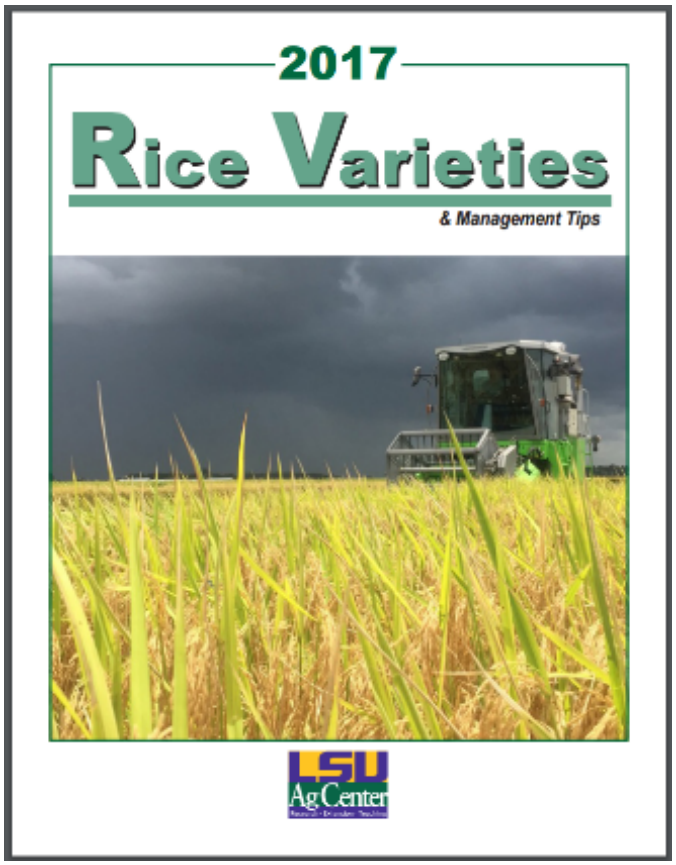
back restrictions follows. This information is put together annually by Dr. Eric Webster for our Rice Varieties and Management Tips publication.

Pre-plant Burndown	Rice Plant Back (Days)
2,4-D	30; 1 inch rain
FirstShot + glyphosate	0
Gramoxone XL	0
Grandstand + glyphosate	21 dry-seeded/14 water-seeded
glyphosate	0
Leadoff 1.5 oz./A	pH < 6.5; 60 days
Leadoff 2.0 oz./A	pH < 6.5; 90 days
Sharpen + glyphosate	0
Valor + glyphosate	30

Rice Varieties and Management Tips

The 2017 version of the Rice Varieties and Management Tips publication is now available online (click here for PDF version). The publication contains the official LSU AgCenter recommendations for all phases of rice production including variety selection, agronomy, fertility, diseases, insects, and weed management. Hard copies of the publication are available at your local county extension. If you are like me, I like to keep a hard copy of the publication in my truck so I can have it handy when I am in the field and not worry if it gets wet. So, be sure to pick up your copy at your local extension office soon.



Additional Information

Louisiana Rice Notes is published periodically to provide timely information and recommendations for rice production in Louisiana. If you would like to be added to this email list, please send your request to dharrell@agcenter.lsu.edu.

This information will also be posted to the LSU AgCenter website where additional rice information can be found. Please visit www.LSUAgCenter.com.

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USDA Methyl Bromide Transition Grants Program
Project Workshop

Insect Pest Management in Rice Mills and Rice Storage Facilities
Optimizing Insect Control and Grain Quality

February 7, 2017

Dear Potential Participants,

We would like to invite you to attend an exciting and informative workshop on insect pest management at rice mills and rice storage facilities. The workshop is organized by the research team of the Post-Harvest Grain Management Project, which was funded by the United States Department of Agriculture, National Institute of Food and Agriculture (Methyl Bromide Transition) Grants Program. We hope you will be able to join us to make this a mutually rewarding experience.

Major topics covered will include:

1) Current status and challenges of rice grain insect pest management
2) Storage insect pests: identification and monitoring
3) Integrated pest management programs for rice mills and rice storage facilities
4) Structural treatments, residual insecticides, and aeration
5) Economics of rice insect control
6) Decision support systems for pest management

Organizers:

Brian Adam	*Oklahoma State University*
Frank Arthur	*USDA-ARS Center for Grain and Animal Health Research*
James Campbell	*USDA-ARS Center for Grain and Animal Health Research*
Tanja McKay	*Arkansas State University*
Mike Stout	*Louisiana State University Agricultural Center*
Ted Wilson	*Texas A&M AgriLife Research*
Yubin Yang	*Texas A&M AgriLife Research*

When and where:

Wednesday March 8th 2017(9:00AM - 3:00PM, lunch will be provided)
H. Rouse Caffey Rice Research Station (main auditorium)
1373 Caffey Rd.
Rayne LA 70578

To register for this workshop, please contact (RSVP by March 1, 2017):

Mike Stout *(Professor and Head, Department of Entomology, 4040 Life Sciences Building, Louisiana State University, Baton Rouge, LA, 70803)*
Phone: (225) 578-1628
Email: mstout@agcenter.lsu.edu

If you have a disability requiring assistance for you to participate in this workshop, please contact Mike Stout at least a week prior to the workshop.

Upcomming

Feb. 23	St. Martin Rice and Soybean School, Breaux Bridge, LA
March 8	Insect Pest Management in Rice Mills and Rice Storage Facilities Optimizing Insect Control and Grain Quality, Crowley, LA
June 28	LSU AgCenter's H. Rouse Caffey Rice Research Station Field Day, Crowley, LA

Contact Information

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