

LOUISIANA SEED REGULATORY, TESTING AND CERTIFICATION PROGRAMS

Louisiana Agricultural Technology & Management Conference

Thursday, February 13, 2014

∞ Seed is at the heart of all we do in agriculture...



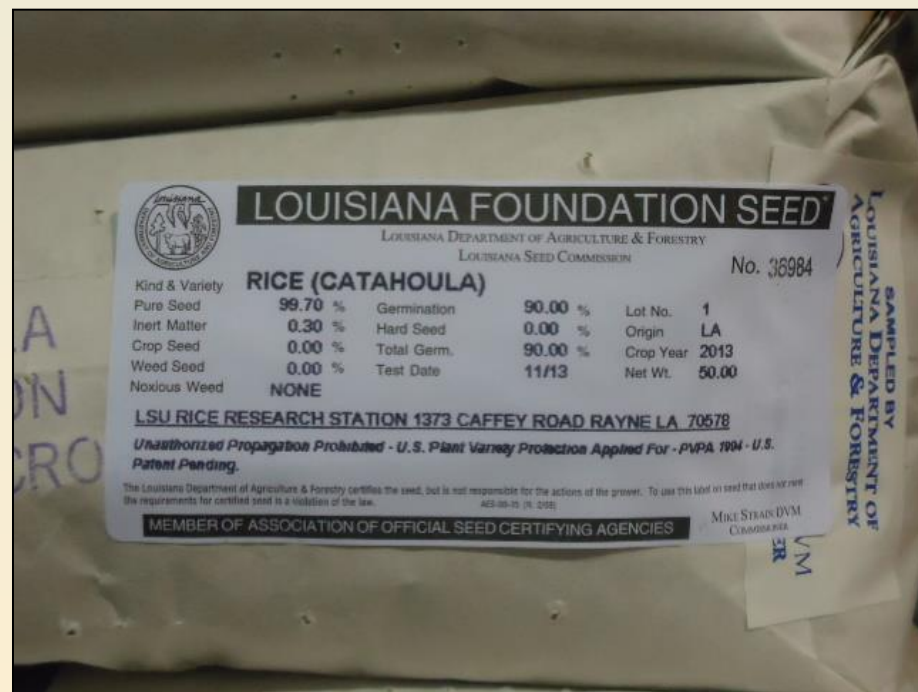
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Agriculture & Forestry

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LOUISIANA SEED REGULATORY AND TESTING PROGRAMS

What's in the bag?



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LOUISIANA SEED REGULATORY AND TESTING PROGRAMS



Authority

- ❑ Louisiana Department of Agriculture & Forestry (LDAF)
- ❑ Agricultural Chemistry & Seed Commission
- ❑ Louisiana Seed Law /Rules & Regulations

Programs

- ❑ Enforcement of the Louisiana Seed Law/Rules & Regulations
- ❑ Operation of the State Seed Testing Laboratory
- ❑ Administration of the Seed Certification Program



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LOUISIANA SEED REGULATORY AND TESTING PROGRAMS

Why a strong seed regulatory program?

- ❑ Louisiana is primarily a seed importing state
- ❑ Ensure that seed meets label guarantees and quality standards
- ❑ *Bottom Line*...Prevents Louisiana from becoming a dumping ground for low quality seed

Regulatory Seed Sampling & Testing

- ❑ Regulatory samples are taken by LDAF inspectors from seed offered for sale
- ❑ Seed is tested for both purity & germination quality
- ❑ As a result... < 3% of regulatory samples non-compliant



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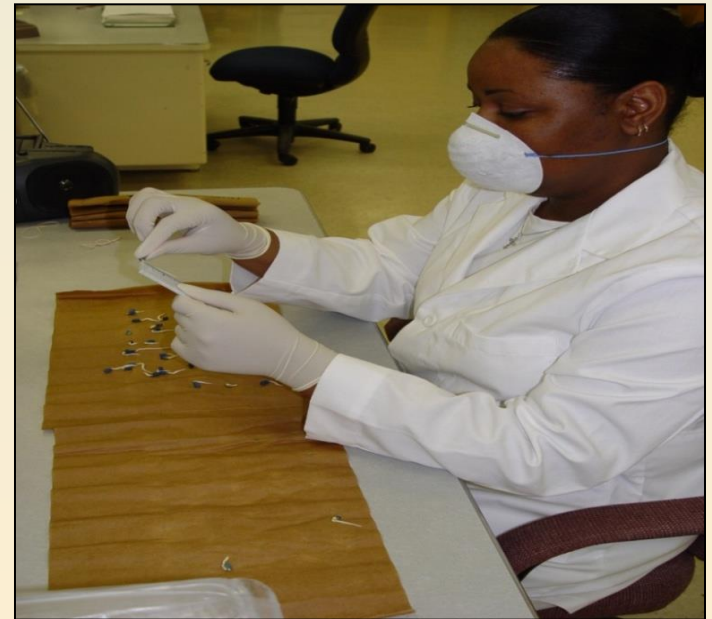
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LOUISIANA SEED REGULATORY AND TESTING PROGRAMS

Louisiana State Seed Testing Laboratory

- ❑ Only seed testing laboratory in Louisiana - *approx. 7,500 samples/year*
- ❑ Provides a wide range of testing services on agricultural, vegetable, lawn and tree seeds
- ❑ Regulatory Testing
- ❑ Service Testing – Service fee basis
 - Seed ID
 - Germination/Seed Vigor
 - Purity
 - Seed Counts
 - Herbicide Resistance
 - Noxious Weed Seed



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LOUISIANA SEED REGULATORY AND TESTING PROGRAMS

Seed Germination vs. Seed Vigor

- ❑ Seed Germination Test – “evaluation of the seed properties that allow emergence and development of a seedling under favorable field conditions”
- ❑ Seed Vigor Test – “evaluation of the seed properties that allow rapid field emergence and development of a seedling under a wide range of field conditions”
- ❑ Seed Vigor Tests - *Examples*
 - *Accelerated Aging* – High heat and humidity (*soybeans, sorghum, others*)
 - *Texas Cool Test* – Extended uninterrupted period of constant cool temperature (*cotton*)
 - Others

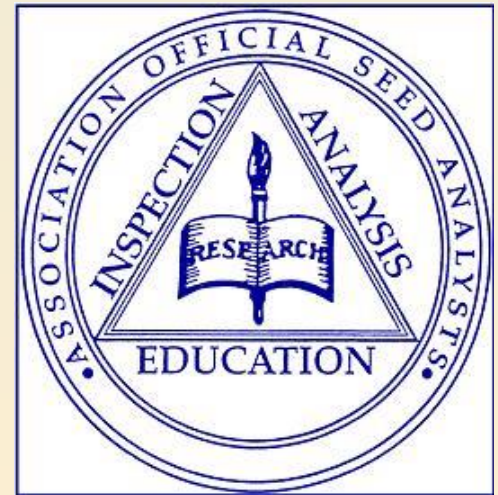


LOUISIANA SEED REGULATORY AND TESTING PROGRAMS

Seed Vigor Testing

The good and the bad of it all...

- ❑ Provides seedling information directly related to field emergence and performance
- ❑ Unfortunately, vigor tests for many agricultural crops do not currently exist
- ❑ Vigor tests are seldom requested by growers
- ❑ However, AOSA standard germination tests provide somewhat of a “seed vigor” component
 - Seedling must contain all vital parts for seedling survival, and those parts proportionate and healthy



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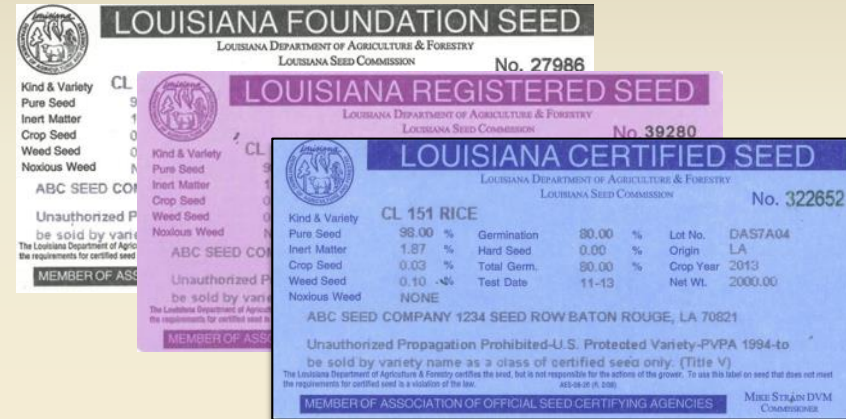
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Louisiana State Seed Testing
Laboratory

LOUISIANA SEED CERTIFICATION PROGRAM

Overview

- ❑ Provides a mechanism to ensure that a reliable source of high quality seed from superior new crop varieties is available to Louisiana producers.
- ❑ Provides a wide range of services that aid seed growers in the production, identification, distribution, and promotion of new and improved crop varieties.
- ❑ Integral step for the Foundation Seed Programs to release new and improved crop varieties to Louisiana growers.



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LOUISIANA SEED CERTIFICATION PROGRAM



Why Seed Certification?

- ❑ New varieties of agricultural crops are being developed and rapidly released to commercial seed producers and their customers.
 - But...the value of these new crop varieties rapidly decreases when genetic purity is lost
- ❑ Seed Certification is a documented system designed to maintain varietal purity (*and other important factors*) in seed and preserve the value of new varieties - from planting through packaging.



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LOUISIANA SEED CERTIFICATION PROGRAM

Structure

- ❑ *AOSCA* – Association of Official Seed Certification Agencies
 - National (International) Seed Certification Agency
 - Maintains minimum crop certification standards that are followed by all participating certification agencies
- ❑ Louisiana Department of Agriculture & Forestry
 - Agency of authority in LA
 - Certify approx. 10,000 acres annually
 - ✓ All major agricultural crops
 - ✓ Vegetables
 - ✓ Turf/Pasture grasses
 - ✓ Trees
 - ✓ Native plant species



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LOUISIANA SEED CERTIFICATION PROGRAM

Certified Seed

“...is the highest quality seed available to growers that contains superior production potential as defined by several important factors”

- ❑ Known genetic source, identity and seed origin
- ❑ High genetic purity
- ❑ High germinating potential
- ❑ Minimum amount of other crop seed, weed and inert matter
- ❑ Known presence or absence of seed-borne diseases
- ❑ Free of noxious weeds and harmful insects



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LOUISIANA SEED CERTIFICATION PROGRAM

How are the Program Objectives Accomplished?

- ❑ Field application
- ❑ Field inspection
- ❑ Seed sampling and testing
- ❑ Official labeling



- ❑ Processing facility inspection
- ❑ Records audit
- ❑ Approval of plant breeder



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LOUISIANA SEED CERTIFICATION PROGRAM

Field Application

- Confirm field eligibility
 - Variety eligibility
 - Field history
 - Field GPS coordinates

- Documentation of planting seed
 - Label
 - Invoice
 - Other Documentation



Department of Plant Pathology & Crop Physiology
302 Life Sciences Bldg. - LSU
Baton Rouge, LA 70803
(225) 578-1464
Fax: (225) 578-1415
Web site: www.lsuagcenter.com

Research and Extension Programs
Agriculture
Economic/Community Development
Environment/Natural Resources
Families/Nutrition/Health
4-H Youth Programs

June 5, 2013

Lester Cannon
Seed Programs
Louisiana Department of Agriculture and Forestry
PO Box 3596
Baton Rouge, LA 70821

Dear Lester,

This letter is to inform you that the Local Quarantine operated as part of the Sugarcane Seedcane Certification Program has been completed for 2012-2013. Six sugarcane and five energycane clones were delivered to Certis/Kleentek and Helena/Sugartech to establish Foundation Stock plants to provide apical meristems for micropropagation of seedcane for sale to the Louisiana sugarcane industry.

Each company received multiple single-bud cuttings of the following clones:

Sugarcane
L 09-099
L 09-112
L 09-131
HoCP 09-804
HoCP 09-814
Ho 09-840
Energycane
Ho 01-32
Ho 04-9076
Ho 07-9014
Ho 07-9017
Ho 07-9027

If you have questions, please let me know.

Sincerely,

Jeffrey W. Hoy



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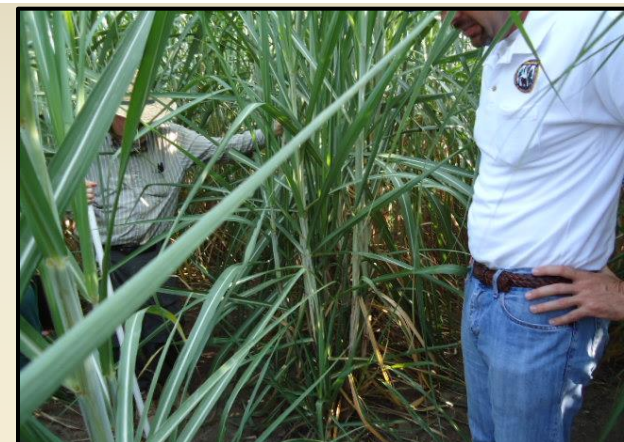
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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

- ❑ Performed by LDAF inspectors to ensure that all field requirements are being met
- ❑ Field requirements are specific to seed kind



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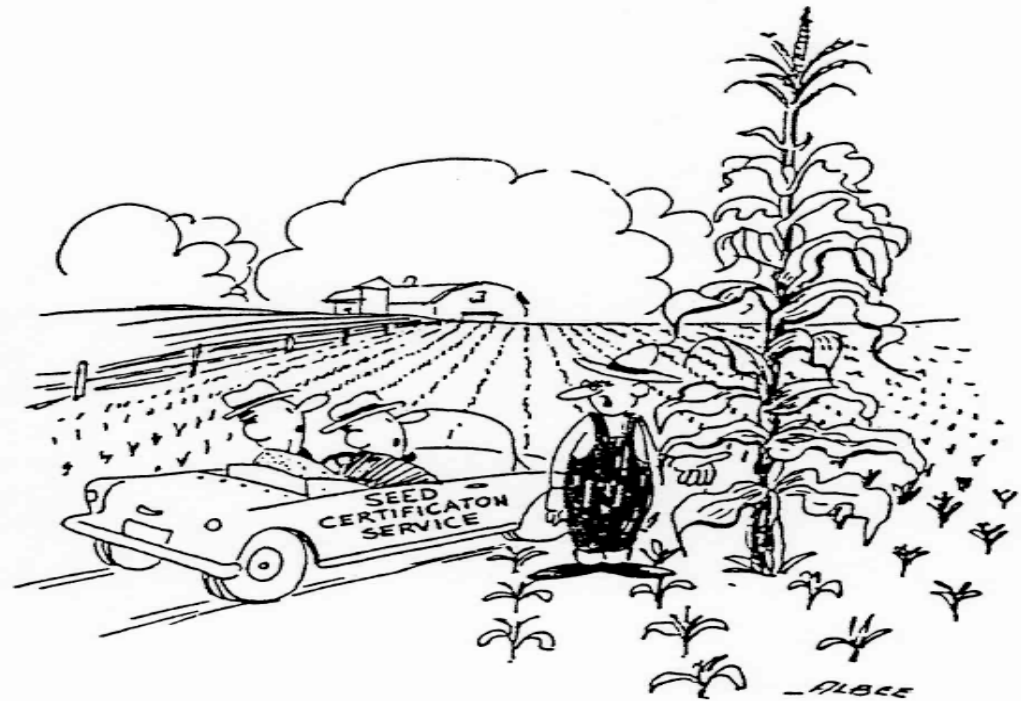
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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

What are we
looking for?



Is this what you mean by "off-type"
plant?



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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

Off-type plants in
sugarcane field



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LOUISIANA SEED CERTIFICATION PROGRAM

Leaf Scald in sugarcane field



Smut in sugarcane field



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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

Red Rice plant in
rice field



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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

Certified sweet
potato seed storage
inspection



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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

Sugarcane Yellow
Leaf Virus
sampling in
certified
sugarcane field

Field isolation
row separating
varieties.



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LOUISIANA SEED CERTIFICATION PROGRAM

We typically think of seed certification being applied to traditional field crops, but plant types with an environmental impact are also included in Louisiana's seed certification program.

Louisiana Native Coastal Plants



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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

Certified turf grass field



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LOUISIANA SEED CERTIFICATION PROGRAM

Field Inspections

Certified pine tree
orchard



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LOUISIANA SEED CERTIFICATION PROGRAM

Sampling and Testing

Samples of seed from certified fields are obtained and tested for both purity and germination quality by the Louisiana State Seed Testing Laboratory.



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LOUISIANA SEED CERTIFICATION PROGRAM

Sampling and Testing

Bulk certified seed
sampled by vacuum
sampling probe



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LOUISIANA SEED CERTIFICATION PROGRAM

Seed Quality Testing

- ❑ Seed examinations are specific to crop being certified
 - Purity analysis
 - ✓ Seed ID
 - ✓ Varietal purity
 - ✓ Weed seed
 - ✓ Other crop seed
 - ✓ Inert matter
 - ✓ Noxious weed seed



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LOUISIANA SEED CERTIFICATION PROGRAM

Seed Quality Testing

- Germination analysis
 - ✓ Germination percentage
 - ✓ Alternate tests upon request...
 - Seed vigor
 - Seed viability



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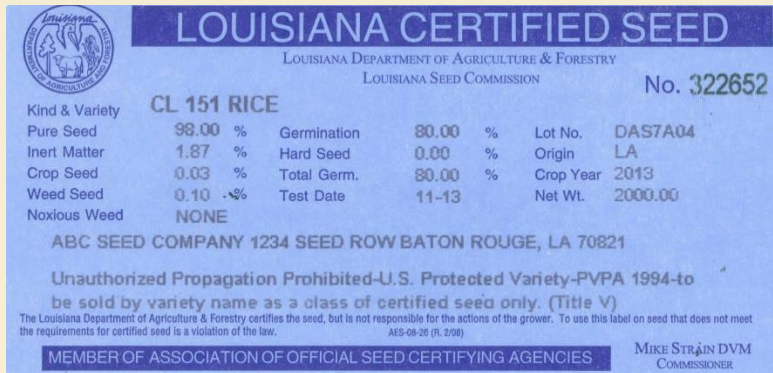
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LOUISIANA SEED CERTIFICATION PROGRAM

Certified Seed Labeling

- ❑ Bulk seed or vegetative propagated plant material
 - Bulk certificate
- ❑ Containerized seed
 - Certified label



LOUISIANA CERTIFIED SEED
 LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY
 LOUISIANA SEED COMMISSION

Kind & Variety: **CL 151 RICE** Lot No. **322652**

Pure Seed	98.00 %	Germination	80.00 %	Lot No.	DAS7A04
Inert Matter	1.87 %	Hard Seed	0.00 %	Origin	LA
Crop Seed	0.03 %	Total Germ.	80.00 %	Crop Year	2013
Weed Seed	0.10 %	Test Date	11-13	Net Wt.	2000.00
Noxious Weed	NONE				

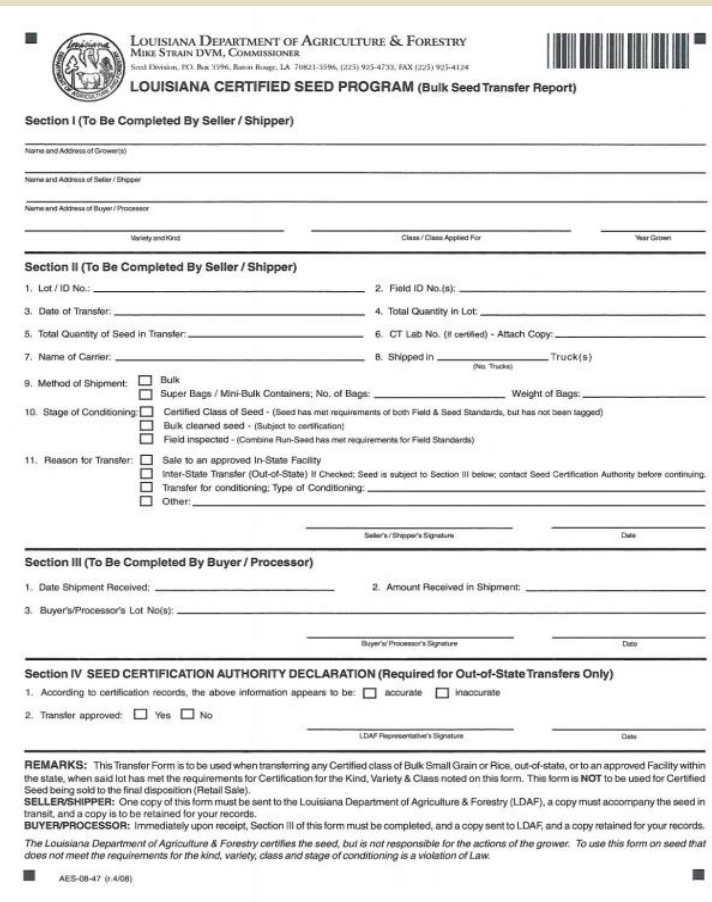
ABC SEED COMPANY 1234 SEED ROW BATON ROUGE, LA 70821

Unauthorized Propagation Prohibited-U.S. Protected Variety-PVPA 1994-to be sold by variety name as a class of certified seed only. (Title V)

The Louisiana Department of Agriculture & Forestry certifies the seed, but is not responsible for the actions of the grower. To use this label on seed that does not meet the requirements for certified seed is a violation of the law. AES-08-20 (R. 2/08)

MEMBER OF ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES

MIKE STRAIN DVM
COMMISSIONER



LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY
 MIKE STRAIN DVM, COMMISSIONER
 Seed Division, P.O. Box 3976, Baton Rouge, LA 70821-3976, (225) 923-4733, FAX (225) 925-4124

LOUISIANA CERTIFIED SEED PROGRAM (Bulk Seed Transfer Report)

Section I (To Be Completed By Seller / Shipper)

Name and Address of Grower(s) _____
 Name and Address of Seller / Shipper _____
 Name and Address of Buyer / Processor _____

Variety and Kind _____ Class / Class Applied For _____ Year Grown _____

Section II (To Be Completed By Seller / Shipper)

1. Lot / ID No.: _____ 2. Field ID No.(s): _____
 3. Date of Transfer: _____ 4. Total Quantity in Lot: _____
 5. Total Quantity of Seed in Transfer: _____ 6. CT Lab No. (if certified) - Attach Copy: _____
 7. Name of Carrier: _____ 8. Shipped in _____ Truck(s) (No. Trucks)
 9. Method of Shipment: Bulk Super Bags / Mini-Bulk Containers, No. of Bags: _____ Weight of Bags: _____
 10. Stage of Conditioning: Certified Class of Seed - (Seed has met requirements of both Field & Seed Standards, but has not been tagged)
 Bulk cleaned seed - (Subject to certification)
 Field Inspected - (Combine Run-Seed has met requirements for Field Standards)
 11. Reason for Transfer: Sale to an approved In-State Facility
 Intra-State Transfer (Out-of-State) If Checked, Seed is subject to Section III below; contact Seed Certification Authority before continuing.
 Transfer for conditioning; Type of Conditioning: _____
 Other: _____

Seller's / Shipper's Signature _____ Date _____

Section III (To Be Completed By Buyer / Processor)

1. Date Shipment Received: _____ 2. Amount Received in Shipment: _____
 3. Buyer's/Processor's Lot No(s): _____

Buyer's/Processor's Signature _____ Date _____

Section IV SEED CERTIFICATION AUTHORITY DECLARATION (Required for Out-of-State Transfers Only)

1. According to certification records, the above information appears to be: accurate inaccurate
 2. Transfer approved: Yes No

LDAF Representative's Signature _____ Date _____

REMARKS: This Transfer Form is to be used when transferring any Certified class of Bulk Small Grain or Rice, out-of-state, or to an approved Facility within the state, when said lot has met the requirements for Certification for the Kind, Variety & Class noted on this form. This form is **NOT** to be used for Certified Seed being sold to the final disposition (Retail Sale).

SELLER/SHIPPER: One copy of this form must be sent to the Louisiana Department of Agriculture & Forestry (LDAF), a copy must accompany the seed in transit, and a copy is to be retained for your records.

BUYER/PROCESSOR: Immediately upon receipt, Section III of this form must be completed, and a copy sent to LDAF, and a copy retained for your records.

The Louisiana Department of Agriculture & Forestry certifies the seed, but is not responsible for the actions of the grower. To use this form on seed that does not meet the requirements for the kind, variety, class and stage of conditioning is a violation of Law.

AES-08-47 (r. 4/08)



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LOUISIANA SEED CERTIFICATION PROGRAM

Certified Seed Processing Facilities

- ❑ Approval by LDAF
- ❑ Facility inspected yearly
 - Equipment on hand to adequately process seed kind
 - Ability to thoroughly clean facility to avoid seed contamination
 - Adequate storage capacity to maintain integrity of seed lots
 - Complete processing records of all seed lots



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LOUISIANA SEED CERTIFICATION PROGRAM

Records Auditing

- ❑ Designated individual responsible for certification
- ❑ Records must be kept on all certified seed lots
- ❑ Documentation to ensure seed identity throughout entire certification process
- ❑ Available for inspection by LDAF

The image displays two forms from the Louisiana Department of Agriculture & Forestry. The top form is the 'LOUISIANA CERTIFIED SEED APPLICATION' (LDAF-100). It includes fields for 'Will Plant Do Custom Conditioning of Certified Seed?' (Yes/No), 'Are Current Copies Of The Following On File?' (Louisiana Seed Certification Standards, Louisiana Seed Law, Conditioning/Processing Plant Records, Federal Seed Act Regulations), and a table for 'ORDER FORM' with columns for 'QUANTITY' and 'AMOUNT'. The bottom form is the 'LOUISIANA CERTIFIED SEED' certificate (LDAF-101). It contains fields for 'CERTIFIED GRASS' (Lot Number, Weight, etc.), 'Lot Number' (00515), 'Date of Issuance' (4-12-15), and 'Authorized Representative' (Handwritten signature). Both forms feature the Louisiana Department of Agriculture & Forestry logo and contact information for Mike Strain, DVM, Commissioner.



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LOUISIANA SEED CERTIFICATION PROGRAM

Plant Breeder Approval

- ❑ Required for any plant breeder growing, developing or supervising the production of breeder seed
- ❑ Application to LDAF
 - Specific qualifications required
- ❑ Applicant approval by Commission



LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY
MIKE STRAIN DVM
COMMISSIONER



OFFICE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES
LOUISIANA SEED COMMISSION

CERTIFICATE OF APPROVED PLANT BREEDER

BE IT KNOWN that the Louisiana Seed Commission is the governmental agency in the State of Louisiana charged with the duty of certifying and regulating seeds and accrediting approved plant breeders in the state, and that

DR. ANNA HALE

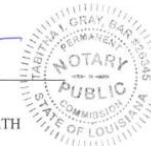
is accredited by the Louisiana Seed Commission as an approved plant breeder in accordance with the laws of the State of Louisiana and the regulations of the Louisiana Seed Commission. Dr. Anna Hale, by and under this certificate, is authorized to produce or supervise the production of all classes of certified seed.

Signed, certified, and attested to by Todd Parker, Assistant Commissioner for the Louisiana Department of Agriculture & Forestry, Office of Agricultural and Environmental Sciences, on behalf of Mike Strain, DVM, Commissioner of Agriculture & Forestry, before the undersigned Notary Public this 8th day of September, 2011 in the City of Baton Rouge, State of Louisiana, United States of America.

FOR: MIKE STRAIN, DVM, COMMISSIONER

BY: 
TODD PARKER,
ASSISTANT COMMISSIONER


TARITHA I. GRAY
BAR ROLL ID#26345
COMMISSION EXPIRES AT DEATH



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Baton Rouge, LA 70821
(225) 925-3770
Fax: 925-3760

Agro-Consumer Services
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(225) 922-1341
Fax: 925-4877

Animal Health & Food Safety
P.O. Box 1951
Baton Rouge, LA 70821
(225) 925-3962
Fax: 925-4103

Forestry
P.O. Box 1528
Baton Rouge, LA 70821
(225) 925-4500
Fax: 922-1356

Management & Finance
P.O. Box 3481
Baton Rouge, LA 70821
(225) 922-1255
Fax: 925-6012

Marketing
P.O. Box 3334
Baton Rouge, LA 70821
(225) 922-1277
Fax: 922-1289

Soil & Water Conservation
P.O. Box 3554
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(225) 922-1269
Fax: 925-5577



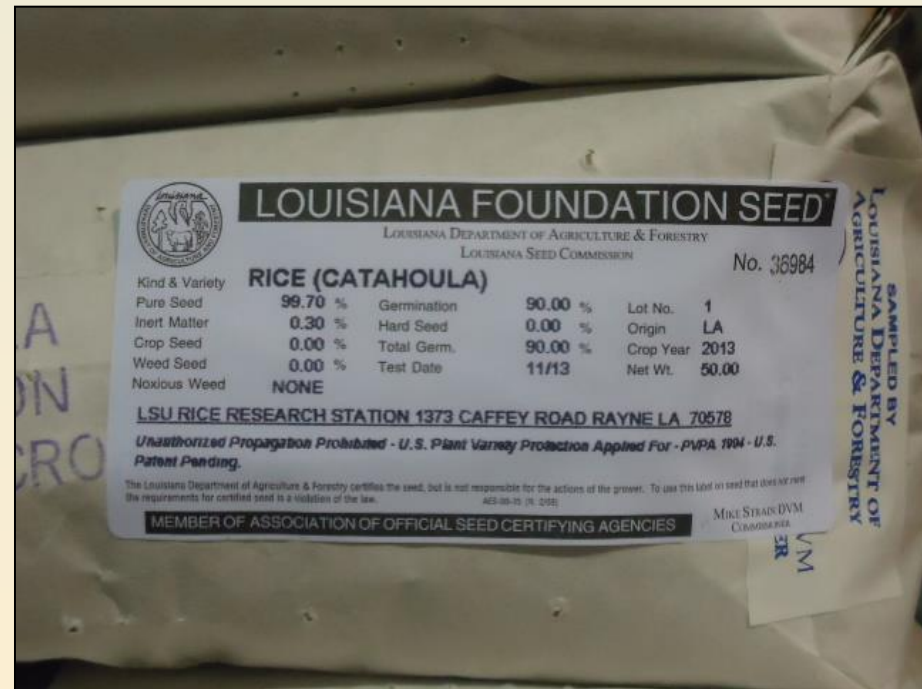
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LOUISIANA SEED REGULATORY, TESTING AND CERTIFICATION PROGRAMS

For additional information...contact the Louisiana
Department of Agriculture & Forestry's Seed Programs
Division

Telephone 225-925-4733
Email seed@ldaf.state.la.us
or visit
www.ldaf.state.la.us



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