

06/24/10

Agricultural Research Service
Agricultural Research Information System
Authorization to Apply for and Use Funds From Outside Sources
Incoming Agreements

Modcode/Log Number: 6202-40-20 0039296

Status: Active

Location/Management Unit Name:

Date Created: 04/17/2009

COLLEGE STATION, TEXAS

SOUTHERN PLAINS AGRICULTURAL RESEARCH CENTER

CROP GERMPLASM RESEARCH

Contact: KLEIN ROBERT R

Type: CoPrincipal Investigator

Series: Genetics

Telephone: 979-777-4470

Type of Agreement: Trust

ARS Primary Agreement Holder: Yes

Award Date: 11/20/2009 Grant Proposal: Yes

Primary Agreement Log Number:

Agreement Number: 58-6202-0-175

Primary Agreement Proposed Total Funds: (b)(4)

Purpose of Funds: Research > 25,000

Date:

Comments:

04/27/2009 Co-PI on a grant proposal being submitted to the United Sorghum Checkoff Program by MMR Genetics; no funds will be received directly by ARS. ARS scientist is helping write the proposal and would become a participant if funded. TP 4/17/09

11/02/2009 Proposal funded as Trust with (b)(4) to ARS. Changing start date to 11/01/09. Adding 416 and AIMS. TP

Original Source of Funds:

4913 UNITED SORGHUM CHECKOFF PROGRAM

Type: Non-Federal

Direct Source of Funds:

4929 MMR GENETICS

Type: Non-Federal

IPSC: Can Request Waiver (Waiver Policy)

Requesting IPSC Waiver: Exempt from Overhead

Waiver approved by BPMS: Yes

Why are you requesting IPSC?

Original Source of Funds is United Sorghum Checkoff Program which is exempt from IPSC.

Start Date: 11/01/2009

End Date: 10/31/2014

Duration: 60 (months)

How are funds to be used?

Category 1 Salaries:	0.00	ARS FTE:	0.00	Total Proposed:	(b)(4)
Other Fed Salaries:	0.00	Supplies:	(b)(4)	Equipment:	(b)(4)
Other Costs:	0.00	Travel:	(b)(4)	RSA:	0.00

Do you or any full-time resident of your household have any activity or financial interest (dealings) with the Cooperating Organization? No

Area Ethics Advisor ONLY:

Confirmation and determination of 'dealings' question responded by SY.

No dealings, no conflict

AREA DIRECTOR ONLY:

Does the SY/MU have the needed expertise/facilities/time to conduct proposed research? Yes

Is proposed funding level and duration adequate to provide the deliverables described? Yes

06/24/10

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Title of Proposal:

RE-INSTATEMENT OF THE SORGHUM CONVERSION PROGRAM

Project Number: 6202-21000-027-07T

Accession: 0418689

Objective:

~~The objective of this research is to evaluate, characterize, and utilize accessions from the world collection with an overall goal of releasing new germplasm resulting in a marked increase in hybrid grain yields.~~ The specific objectives include the development and utilization of genotyping methodology developed by the ARS incumbent for marker-assisted selection of photoperiodism; the genetic fingerprinting of tropical accessions and photoperiod-converted materials to obtain a catalog of the regions of the tropical genomes that are critical for agronomic performance; map and identify markers linked to additional trait loci including dwarfism genes for use in marker-assisted selection; and investigate value-added traits that emerge during the conversion of tropical sorghums to temperate adaptation.

Approach:

Utilize molecular markers linked to photoperiod (ma) genes to selected backcross progeny during the introgression of photoperiod-insensitive alleles into tropical germplasm. Utilize Diversity Array Technology (Dart) markers arrays to fingerprint tropical accessions while fingerprinting backcross-derived lines to catalog genomic blocks that are inherited from the tropical accession or the temperate donor parent. Utilize mapping populations developed by the ARS incumbent or MMR Genetics to map additional trait loci including dwarfism genes, and utilize molecular markers linked to these traits to expedite their introgression during the conversion of tropical accessions to photoperiod-insensitive, dwarf-germplasm suitable for growers in temperate climates.

Keywords:

SORGHUM
EVALUATION
GENETICS
BIOTECHNOLOGY
ENHANCEMENT
GERMPLASM
CHARACTERIZATION

Work to be Performed: Inhouse

Non ARS Performing Institutions:

Title of In-house Project:

GENETIC ANALYSES AND TRAIT MAPPING TO EXPLOIT UNTAPPED
GENETIC DIVERSITY IN SORGHUM

Project Number: 6202-21000-027-00D

Accession: 0412234

Relevance to Parent Project:

Objective 4: Conduct proof-of-concept study, utilizing molecular markers, to expedite the conversion of tropical sorghum to temperate adaptation. We will utilize the genome map and molecular markers discovered under Objective 3 to evaluate the introgression of recessive alleles conditioning photoperiod insensitivity, plus reduced plant height, into tropical germplasm. This molecular evaluation will supplant the additional selfing generations and associated phenotypic evaluation normally required to track the introgression of recessive alleles into exotic germplasm during their conversion to photoperiod-insensitive, short-stature cultivars suitable for production in the U.S.

Is the proposed research directly related to the in-house project of the SY? Yes

Describe the deliverables that the Agency will provide the funding organization:

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The deliverables will be converted tropical germplasm suitable for U.S. production, new breeding methodologies, and new germplasm with the potential for marked increase in hybrid grain yields.

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05/24/10

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<u>Sub Class</u>	<u>Code</u>	<u>Description</u>	<u>%</u>
NP	301 N	Plant Genetic Resources, Genomics and Genetic Improvement	
STP	2.1.2.5	Plant Germplasm Evaluation	80
STP	2.1.1.4	Plant Germplasm Characterization	20
SOI	1520	GRAIN SORGHUM	100
Activity	4922	OTHER GENETICS & HEREDITY	100
FOS	1080	Genetics (includes breeding)	100
RPA	203	PLANT BIOLOGICAL EFFICIENCY ANALYSIS	100

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06/24/10

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Date Entered	FY	Accounting Code	Agreement Number	IPSC %	Amount Received	
					New	Carryover
01/31/2010	2010	093-6202-226	58-6202-0-0175--		(b)(4)	\$0.00

Fund Authorization: No Year

IPSC Waived: Yes

How is total amount to be used?

Total Received Amount: (b)(4)

Category 1 Salaries:	0.00	Supplies:	0.00	Equipment:	0.00
Other Federal Salaries:	0.00	Travel:	0.00	RSA:	0.00
Other Costs:	(b)(4)				

Comments:

Transmittal #10-19. IPSC removed per waiver per DAM. t1s 02.24.2010

***** Official *****