

Final

CONSERVATION INNOVATION GRANTS

Semi-Annual Progress Report

Grantee Name: Southwest Mississippi RC&D, Inc.	
Project Title: Bio-Energy Heating System Demo for Poultry Houses Using Litter (primary) and Wood Residues (secondary)	
Agreement Number: NRCS 69-3A75-9-135	
Project Director: Martha Watts	
Contact Information: PO Box 3670 Brookhaven, MS 39603	Phone Number: 601-833-5539 office 601-748-2622 cell E-Mail: mmwatts@bellsouth.net or bhutchins@wildblue.net
Period Covered by Report: October 1, 2010 – Sept. 22, 2011	
Project End Date: September 30, 2011 (one year no-cost extension requested 9-13-2011)	

A) Summarize the work performed during the project period covered by this report:

Final Project Report

(except for sole remaining item of Workshop/Field Day
to be conducted in summer 2012)

- (1). All three boilers are on site, mounted on a concrete pad and ready for operation with all electrical and piping to the chicken houses installed. Each boiler has 1 million BTU capacity and will support two chicken houses with heat. Each boiler has its own controls that manages its operations.
- (2). There are three concrete, wood walls and metal roof bins completed at each boiler location to house the mixed fuel ingredients (1/2 broiler litter, 1/4 wood waste and 1/4 Miscanthus). Electricity has been run to all 3 bins.
- (3). All the insulated Pex 1" hot water pipe is installed connecting the boilers to the heat transfer system in each of the 6 chicken houses.
- (4). All six of the air handlers, coils, plenums, fans and motors are installed in each of the six chicken houses.
- (5). All the computers are installed and connected to the heating.
- (6). All the solar PV equipment and materials are installed. This 5KW system will off-set the electric power used by the heating system.
- (7). A large raw materials storage facility was constructed at Brinson Farms Sawmill East of the chicken houses. It has full concrete floors, 3 wood wall bins, and a metal

roof with gutters. This facility is where the woody biomass and chicken litter materials will be stored for mixing and delivered to the boilers. 30 feet by 12 feet. The different combustible materials will be mixed from these three bins.

(8). A PTO driven mixing wagon was purchased to be used to prepare the finish materials for the boilers. It will also be used to deliver materials via tractor to each boiler. The wagon has a discharge auger for transport to the bins adjacent to each boiler.

(9). Brinson Farms also purchased a self contained diesel grinder to be utilized to produce woody materials for the boilers. It is stationary at the site described at #7.

(10). Installed duct materials for all six houses, six hot water pumps at each chicken house, general plumbing fixtures.

(11). All Electrical connections to boilers, computers, solar tie-in and heaters in each chicken house are completed.

(12). Computer has been installed and programmed for energy analysis over the next 9 months before conducting the final workshop for other poultry producers.

**B) Describe significant results, accomplishments, and lessons learned.
Compare actual accomplishments to the project goals in your proposal:**

The following Deliverables, per Contract Agreement, have been accomplished:

1. Install a biomass (litter, wood residue) combustion boiler system on a typical 6-house broiler farm. Completed: see "A" above.
2. Collect data on system performance, cost, energy savings, and broiler performance. See "C" below.
3. Conduct outreach and education to get the information to Mississippi's 2,000 poultry producers. See "C" below.
4. Inform interested producers of incentives available for installing such systems. See "C" below.

C) Describe the work that you anticipate completing in the next six-month period:

A one-year, no-cost extension of this CIG Grant Agreement was requested on 9-13-2011. Approval of the extension has been recommended by William Boyd, federal grant representative and technical contact. We need this time to fully evaluate system performance before holding final outreach event. The system performance will be evaluated for the 9-month period of October 2011 – June 2012 to determine

energy savings and broiler performance. Computerized monitoring systems have been installed to accomplish this. With the information collected, overall system performance and economic analysis will be completed in time for a workshop or Field Day to be held in the summer of 2012 for Mississippi's poultry producers. The field day and publicity surrounding it will inform producers of the results and also of financial incentives available for installing similar renewable energy systems and also energy efficiency improvements.

We need more clarification on Deliverable No. 5 "Attend at least one NRCS CIG Showcase or comparable NRCS event during the period of the grant."

D) Provide the following in accordance with the Environmental Quality Incentives Program (EQIP) and CIG grant agreement provisions:

1. A listing of EQIP-eligible producers involved in the project, identified by name and social security number or taxpayer identification number

Brinson Farms LLC
John Logan, Owner and Operator
6367 Highway 84
Prentiss, MS 39474
601 270 8921 (cell), 601 792 5028 (office)
Farm No. 1494.T3218

The TIN for Brinson Farms is 64-0915051. The local NRCS office and this producer have assured us that there is no problem with the \$300,000 EQIP payment limitation (life of 2008 Farm Bill).

An "Eligibility of Land for EQIP" report completed, signed and provided by the local NRCS representative was included in the project progress report of September 30, 2010.

2. The dollar amount of any direct or indirect payment made to each individual producer or entity for any structural, vegetative, or management practices. Both biannual and cumulative payment amounts must be submitted.

The total payments to date from grantee (RC&D) to the single participant, Brinson Farms, totals \$27,347. This amount has been documented and earned by participant. We are simply waiting on receipt of his invoice.

3. A self-certification statement indicating that each individual or entity receiving a direct or indirect payment for any structural, vegetative, or management practice through this grant is in compliance with the adjusted

gross income (AGI) and highly-erodible lands and wetlands conservation (HEL/WC) compliance provisions of the Farm Bill.

The above self-certification statement from Brinson Farms is attached as a part of this report.

Justification for requested Advance on National CIG project (NRCS 69-3A75-9-135):

A third reimbursement is now being requested for the remaining grant funds of \$34,148.

This amount includes:

1. \$23,298 for grantee Indirect Expenses (12% Indirect Cost Rate as proposed and approved in original project proposal),
2. \$10,850 for additional eligible project expenses incurred since last reimbursement request,
3. An advance of \$1,500 to be used for conducting a workshop and associated outreach in the summer of 2012 (after 9 months of project performance evaluation in October 2011 – June 2012).

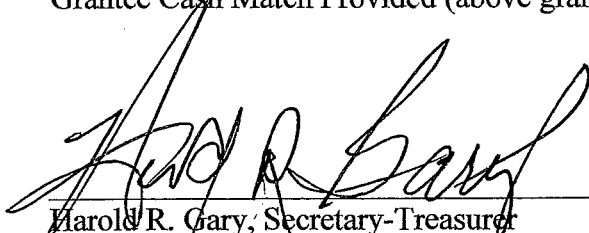
Enclosed are full documentation of project contributions by the EQIP-eligible landowner (John Logan, Brinson Farms, Prentiss MS) and by the grantee (Southwest Mississippi RC&D, Inc.) showing more than the required grantee match of 50%, including more than the required cash match of 25%.

Final Project Budget (See next page for Contributions by Brinson Farms; also see 2-inch Binder enclosed with documentation):

Cash Expenditures by Brinson Farms above \$169,350 in grant funds	\$126,525
In-Kind Contributions by Brinson Farms	53,285
Indirect Cash Contributions by Southwest MS RC&D	<u>13,877</u>
TOTAL Match Provided by Grantee	\$194,787
CIG grant approved/Match Required of Grantee	<u>\$194,148</u>
Total Project Cost	\$388,935

Grantee Cash Match Required = 50% of grant = \$97,074

Grantee Cash Match Provided (above grant reimbursement) = \$126,525


Harold R. Gary, Secretary-Treasurer
Southwest MS RC&D, Inc.
For: Martha Watts, Chair

9-21-2011
DATE

in securing grants in excess of \$5 million for energy efficiency improvements in 2003-2009.

Interested producers should contact RC&D to have an application package sent by mail or e-mail at southwest@msrcd.org or call 601-833-5539.

BROILER PRODUCER NEEDED FOR WOOD HEATING DEMONSTRATION PROJECT

Southwest MS RC&D is offering to pay 50% of the cost of installing a demonstration biomass (wood) heating system on a typical Mississippi broiler farm. RC&D will also provide technical assistance in designing the appropriate system that will be intended to burn local wood residue with the potential for adding broiler litter as part of the fuel. The intent is to install the latest state-of-the-art system to demonstrate the potential for replacing propane heating systems.

Green wood chips have an energy value of 8.5 million Btu per ton. At a typical cost of \$35 per ton, this translates to an energy cost of \$4.10 per million Btu. Propane has an energy value of 91,600 Btu per gallon. At a cost of \$1.50 per gallon, this translates to an energy cost of \$16.30 per million Btu or four times that of wood.

Wood heating systems for poultry houses are being used successfully in other states. We want to take their experiences—combined with the latest technology—and demonstrate the feasibility for similar systems in Mississippi to help reduce the energy cost to poultry producers. These modern systems include automated fuel feed and may be integrated with existing broiler house computer controller

systems to maximize efficiency and facilitate nearly automatic operation.

Any broiler producer interested in being considered for this demonstration project should contact Southwest MS RC&D.

Producers will be provided with selection criteria, cost estimates, etc. RC&D has approximately \$160,000 for this demonstration project. The selected producers will be required to provide 50% of the total cost of the biomass heating system, but half of this producer cost may be in-kind contributions (labor, equipment, supplies, etc.).

For more details, contact Bennie Hutchins at Southwest MS RC&D at 601-833-5539 or 601-757-1303 or e-mail bennie.hutchins@ms.usda.gov.

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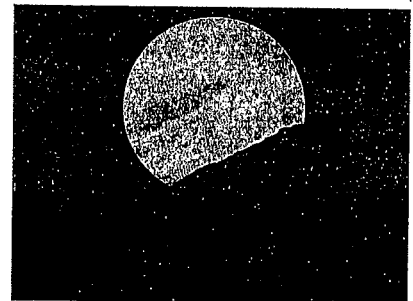


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EQIP Eligibility Self-Certification Form

Participants in Conservation Innovation Grants must meet the eligibility requirements for the USDA NRCS Environmental Quality Incentives Program (EQIP) program. We have included these requirements below as a checklist. Please review the requirements and certify to Southwest Mississippi RC&D that you meet them.

To be eligible to participate, you must meet all of the following eligibility criteria:

- You are a producer engaged in livestock or agricultural production, including forestry, and/or are an owner of agricultural lands, nonindustrial private forest lands, or other lands on which agricultural products, livestock, or forest-related products are produced.
 - a. Producers with **agricultural** land must at minimum produce and/or sell \$1,000 of agricultural products annually.
 - b. Producers with nonindustrial private forest land must have land capable of growing trees, but are **exempt** from the \$1,000 requirement.
 - c. Nonindustrial private forest land is rural land that has existing tree cover or is suitable for/capable of growing trees.
 - d. Producers of nonindustrial private forest land include individuals, groups, associations, corporations, Indian Tribes, or others with clear decision-making authority over the land who are not principally engaged in primary processing of raw wood products and are not a corporation or other legal entity with publicly traded stock.
- You are an individual, legal entity, or joint operation with an interest in the land being enrolled.
 - a. Interest in land means you are the owner or renter of land that includes a farming or forestry operation, or you have an interest in the products produced by the operation.
- You must have control over the land you enroll for the term of the proposed contract period.
 - a. Control means title, a contract, or other agreement/legal conveyance.
 - b. For applicants who plan to implement structural and vegetative practices on property they do not own, the applicant must submit written concurrence by the landowner at the time of the application or the owner may also be signatory to the program contract with zero percent interest.
- You are in compliance with provisions for protecting the interests of tenants and sharecroppers, including the provisions for sharing payments on a fair and equitable basis.
- You are in compliance with the highly erodible land (HEL) and wetland conservation (Swampbuster) requirements of the 1985 Farm Bill, as amended in the 1990, 1996, and 2002 Farm Bills. Specifically, you have not:
 - a. Produced an agricultural commodity on highly erodible soils without following an approved conservation plan or system; or
 - b. Produced an agricultural commodity on wetlands converted after 1985, or converted wetlands after 1990 in a way that makes the production of an agricultural commodity possible. [If you are unsure, please review the Highly Erodible Land Conservation-Wetland Conservation (HELC-WC) provisions in USDA Form AD-1026.]
- You have not received, directly or indirectly, costshare or incentive payments that in aggregate exceed \$300,000 during the period of fiscal years 2008 through 2012.
- You do not exceed the adjusted gross income limitations:
 - a. The applicant's (person or legal entity) average adjusted gross **non-farm** income is below \$1,000,000 (unless not less than two-thirds (66.66%) of the average adjusted gross income (AGI) is average adjusted gross **farm** income).
 - b. For legal entities, the amount of any payment shall be reduced by the proportion of direct and indirect ownership interest held by **members** who have an average adjusted gross income, average adjusted gross farm income, or average adjusted gross non-farm income in excess of \$1 million.
- You are not applying for the same practice on the same land enrolled in any USDA conservation program. There may be no overlap on any part of the land enrolled for the same practice.
- You must not have same piece of land enrolled in the Conservation Reserve Program (CRP) or the Conservation Reserve Enhancement Program (CREP) during the contract period.
- The practices or activities being applied must not conflict with the purpose of any other USDA conservation program contracts.

EQIP Eligibility Self-Certification Form

It is your responsibility to verify that you meet these requirements. If you receive funding from NRCS but are not in compliance with these requirements, your contract could be terminated and you will have to return your funding to NRCS. We do not require but encourage you verify your eligibility and/or file appropriate paperwork with your local FSA/NRCS offices if you:

- Have participated in NRCS cost-share programs currently or in the past, particularly EQIP;
- Produce agricultural commodities (as defined in the Food Security Act -- trees are not included);
- Are unsure about whether you meet any of these requirements;
- Are interested in applying for NRCS cost-share programs in the future; or,
- Wish to thoroughly document your eligibility, in case it ever comes into question.

Paperwork submitted to FSA/NRCS includes:

- Average Adjusted Gross Income (AGI) Statement: USDA Form CCC-926. Legal entities should also submit the Member's Information form: USDA Form CCC-901.
- Highly Erodible Land Conservation-Wetland Conservation (HELC-WC): USDA Form AD-1026.

Please check one below:

- ☒ I meet all of the above requirements, and my paperwork is currently on file with NRCS and/or FSA.
- ☐ I meet all of the above requirements, and I have submitted relevant paperwork to NRCS and/or FSA to confirm my eligibility.
- ☐ I meet all of the above requirements, but have not submitted paperwork to NRCS and/or FSA.

Brinson Farms LLC

John W. Boyer, Manager
Applicant Signature

BRINSON FARMS LLC
Applicant Name

9/21/2011
Date

RC&D

Southwest Mississippi Resource Conservation & Development, Inc.

P. O. Box 3670 ♦ Brookhaven, MS 39603-7670

601-833-5539 ♦ Email southwest@msrcd.org

DATE: September 13, 2011

TO: Gregorio Cruz
USDA-NRCS
PO Box 2890
Room 5231 South Building
Washington, DC 20013-2890

*Request for 1-Year
Extension*

Emailed 9-13-11

SUBJECT: CIG Bio-Energy Demo at Brinson Farms, Jeff Davis County, MS
NRCS 69-3A75-9-135

I made a site visit to Brinson Farm on 9-12-2011 for review of subject CIG project. All work has been completed on installation of the Bio-Energy System (deliverable No. 1). I am in the process of preparing the current progress report and third SF-270 with documentation to be submitted later this week.

In the meantime, we need to request a one-year no-cost extension on this CIG in order to finish the remaining deliverables of collecting data on system performance, energy savings, and broiler performance and conducting outreach and education. These deliverables require the system to be operational over at least a 7-month period (October 2011 through April 2012). This request would extend the Grant Agreement to September 30, 2012.

All grant funds will be obligated with the current SF-270 to be submitted later this week with the exception of \$1,500 budgeted for the outreach component. The required grantee match is more than exceeded with the documentation to accompany this latest SF-270. Grantee's indirect cost of \$23,298 is also to be requested by this SF-270.

If you need additional information, please contact our Energy Program Coordinator, Bennie Hutchins at 601-748-2622, email bhutchins@wildblue.net. He has been designated as our Council contact on this CIG project.

Sincerely,

Harold R. Gary, Secretary-Treasurer
Southwest MS RC&D Council

For: Martha Watts, Chair