



Dairy Digester Research and Development Program (DDRDP)

Request for Research Proposals (RFP)

Release Date: April 9, 2015

Grant Proposals Due: May 15, 2015 5:00 P.M. PDT

Late grant proposals will not be accepted.

www.cdfa.ca.gov/go/dd

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The California Department of Food and Agriculture’s (CDFA) Dairy Digester Research and Development Program (DDRDP) is pleased to announce funding available for the Phase II-Research Program. The DDRDP was authorized by the Budget Act of 2014. Funding for the program comes from the Greenhouse Gas Reduction Fund. The purpose of the research program is to fund research and demonstration projects that reduce greenhouse gas (GHG) emissions in California’s dairy sector, and improve understanding of the scientific and technical aspects of dairy digesters, including methods to enhance their economic feasibility, widespread implementation and environmental benefits.

1. FUNDING AND GRANT TERM

CDFA will award a total of \$500,000 for research and demonstration projects under the DDRDP – Phase II Research Program. One or more projects up to \$500,000 or less will be considered for funding based upon merit of proposed research. Matching funds are not required, but are highly encouraged. CDFA reserves the right to offer an award amount different than the amount requested.

Projects cannot exceed two years and seven months, and funds may not be expended prior to August 1, 2015 or after February 28, 2018.

2. PROJECT ELIGIBILITY

California academic research institutions and non-profit organizations are eligible to apply. The CDFA DDRDP will not support the development of proprietary products.

3. TIMELINE

Item	Estimated Dates
Request for Proposals released	April 9, 2015
Grant Proposals due	May 15, 2015 5:00 P.M. PDT
Proposal evaluation period	May - June 2015
Announce grant awardees	July-August 2015

4. RESEARCH PRIORITIES

The objective of this research program is to study and facilitate changes in manure management practices at California dairies that will directly result in GHG emissions reduction. All proposed projects *must* include a demonstration or field testing component that results in quantifiable and verifiable GHG emissions reduction. For example, the GHG benefits of a change in manure management practices from flush to scrape could be researched and the results utilized to update and/or validate quantitative tools or models.

Project proposals should examine uses of digester byproducts and may include:

- Digestate utilization, characterization, and analysis
- Co-digestion feedstock

- Comparison of manure management practices, e.g. flush or scrape versus anaerobic digestion, etc.

The project may include a component to develop or update quantification tools to determine the feasibility of digester projects. These tools should evaluate project feasibility based on several parameters including but not limited to verifiable GHG emissions reduction, inclusion of co-digestion feedstocks, and highest environmental (water, soil and air) quality protection.

5. HOW TO SUBMIT A GRANT PROPOSAL

Grant Proposals must be submitted by e-mail to: grants@cdfa.ca.gov no later than Friday, May 15, 2015, 5:00 P.M. PDT.

Late submissions will not be accepted.

Grant Proposals are only considered complete if all required components/sections are attached in one email submission. Mailed or faxed copies will not be accepted. Applicants will receive a confirmation email within two business days from the date of their Grant Proposal submission.

ASSISTANCE AND QUESTIONS

CDFA cannot assist in the preparation of Grant Proposals; however, general questions may be submitted to grants@cdfa.ca.gov. A list of Frequently Asked Questions (FAQs) and responses will be posted to CDFA's DDRDP website www.cdfa.ca.gov/go/dd as follows:

Questions Received by:	Responses Posted by:
Monday, 4/20/15 – 5:00 pm PDT	Thursday, 4/23/15 – 5:00 pm PDT

6. PROPOSAL REVIEW AND EVALUATION

CDFA will conduct three levels of review of the proposals, including:

1. *Administrative review* to determine whether grant application requirements have been met.
2. *Peer Review* - Proposals will be circulated to peer reviewers with appropriate scientific and technical expertise to evaluate the scientific soundness of the proposed project. Proposed research must achieve GHG emissions reduction and be determined scientifically sound by peer-reviewers to be considered for further review by the TAC.
3. *Overall Review* – Proposals will then be evaluated by DDRDP Technical Advisory Committee (DDRDP/TAC), which is a sub-committee of the California-Federal Dairy Digester Working Group. The TAC will evaluate the merits of the grant application based on the established scoring criteria. Completed peer reviews will be provided to the TAC to assist them in their evaluation. Final scores will be developed and recommendations will be made. Final approval of the proposals will be made by the Secretary of CDFA.

The [evaluation criteria](#) are found at the end of this document.

7. AWARD NOTIFICATION

All applicants will be notified regarding the status of their proposal. Successful applicants will be provided a grant agreement following award announcement. Grant recipients may not begin project activities until a grant agreement is executed by both parties.

Grant recipients will be required to submit quarterly reports and a *final* report to demonstrate project accomplishments, address problems and delays, and describe activities planned during the next reporting period. Grant payments are subject to receipt and acceptance of deliverables as approved by CDFA in the Scope of Work. Grant payments will be reimbursed in arrears.

Upon request, applicants will be provided feedback regarding their proposal. Applicants will be provided a summary of comments; final scores will not be released. Peer reviewers will remain anonymous.

8. GRANT PROPOSAL REQUIREMENTS

Grant proposals must include Sections A through I as described below.

Section A: Cover Page must be submitted using the provided template as a PDF file.

Sections B through G must not exceed 12 single-spaced pages with one-inch margins and 12-point font, and submitted in PDF format.

Section H: Budget Template must be submitted as a PDF prepared using the Microsoft Excel template provided. Budgets that do not use the required template will not be accepted.

Section I: Appendices must be submitted as a PDF file.

Proposals that do not meet the specified formatting requirements or exceed 12 pages will not be accepted.

ALLOWABLE COSTS

A cost is allowable if it directly relates to the project and is incurred solely to advance work under the Grant Agreement. Allowable costs include, but are not limited to, salaries and wages, indirect costs [allowable on personnel costs (salaries and benefits) only], fringe benefits, consultant services, travel, telephone, equipment (lease/rental), subcontractors and materials, data processing, land rentals, training and communications. Indirect costs are limited to 10% on personnel costs (salaries and benefits) only.

UNALLOWABLE COSTS

Unallowable expenses include but are not limited to costs for publication in scientific journals, hospitality suites, alcoholic beverages, costs of entertainment and costs for organized fund

raising including financial campaigns and solicitation of gifts. Unallowable costs will not be reimbursed.

A. COVER PAGE

Use the Cover Page template to provide the following information:

1. Project Title.

Provide a unique and concise name for the proposed project.

2. Project Leader(s).

Specify each project leader's name, title, affiliation, mailing address, telephone number, and email address.

**A two-page resume, a list of recent publications, and a description of current research/outreach activities must be included for each project leader under Section I: Appendices.*

3. Cooperator(s).

Specify each cooperator's name, title, affiliation, mailing address, telephone number, and email address.

**A letter from each cooperator must be included under Section I: Appendices describing their role in the project, estimated time commitment, and a statement of agreement to participate in the project. Do not include a cooperator's name on the proposal unless a support letter is included with the proposal at the time of submission.*

4. Supporter(s).

Specify organizations and/or individuals that support the ideas and objectives of the project but are not providing funding.

**A letter from each supporter must be included under Section I: Appendices explaining the rationale for their support. Do not include a supporter's name on the cover page unless the support letter is included with the proposal at the time of submission.*

5. CDFA Funding Request Amount/Other Funding.

Provide funding request (\$) figure from CDFA and amount committed from extra-mural or in-kind sources for each year of the project. Specify organizations that have committed funding to this project including funding amounts, contact names, addresses, and telephone numbers.

B. PROJECT SUMMARY (not to exceed two pages)

1. Problem

Simply and concisely define the problem to be addressed.

2. Objectives, Approach, and Evaluation

State specific project objectives including estimated GHG emissions reduction, briefly describe the approach to be used, and identify criteria that will be used to evaluate the project's success.

3. Beneficiaries

Specify those who will use and benefit from the project findings or products.

C. PROJECT NARRATIVE

1. Problem

Specify the problem to be addressed by the project and describe its extent, severity, and magnitude. Explain the potential impact of this project on a statewide level.

2. CDFA DDRDP Research Priorities

Identify and explain how the project will address one or more of CDFA DDRDP Research Priorities. Explain how the project will contribute to DDRDP goal of reducing GHG emissions and advancing approaches that increase the widespread implementation of dairy digesters and improve their environmental and economic performance.

3. Impact

Explain agronomic, economic, environmental, including greenhouse gas emissions reduction and other implications on a local, regional, and statewide basis.

4. Long-Term Solutions

Indicate the project's potential for measurable progress toward long-term solution(s) to the specific problem(s) addressed in the proposal.

5. Related Research

Describe previously conducted related research and/or education efforts.

6. Contribution to Knowledge Base

Explain the project's contribution to current knowledge and specify new information to be generated by the project.

7. Potential Adoption

Describe practical applications and incentives for adoption of the proposed practices or technologies in commercial dairy digester sites.

D. OBJECTIVES

1. Provide a clear, concise, and complete statement of each specific research objective.

E. WORK PLAN AND METHODS

1. Work Plan

Organize the work plan into project tasks and sub-tasks, which are units of work designed to achieve the specific project objectives. Each task should be numerically identified with a descriptive title and should include a description of the activities and methods. Describe interim and final task products and completion dates or milestones. Use the Work Plan template provided to summarize all tasks and sub-tasks.

2. Methods

Explain the methods to be employed, indicating data to be gathered, parameters to be measured, and methods of analysis to be used, including sampling scheme, experimental design and GHG emissions reduction methodology, as applicable.

3. Experimental Site

Provide a graphical description of experimental site, if applicable.

F. PROJECT MANAGEMENT, EVALUATION, AND OUTREACH

1. Management

Describe the role of project leaders and cooperators and briefly explain how the various participants' work will be coordinated.

2. Evaluation

Provide a method for assessing the progress and success of the project, including cost/benefit analysis of adoption of new technologies, GHG emissions reduction as well as barriers to adoption, where applicable.

3. Outreach

Project proposals are encouraged to include an outreach component and include it in the work plan. Specify outreach activities, events and/or approximate dates when they will occur. Projects proposals may include outreach activities such as grower field days, meetings, and trade journal articles.

G. BUDGET NARRATIVE

Provide a detailed narrative of your proposed budget. The budget should contain a narrative in paragraph format for each budget category in order to determine the costs are reasonable and allowable. Expenses described in the Budget Narrative must be associated with expenses that will be covered by DDRDP and clearly support the project. Assume a start date of August 1, 2015 and explain all of the following:

1. Personnel. Provide classification level, percent of time based on full time salary/wages, benefits, employment period, and name of individual to be hired, if available.
2. Operating Expenses. Itemize and justify all of the following operating expenses:
 - A. *Supplies*: Itemize and justify all supplies to be purchased. Supplies are anything with an acquisition cost under \$5,000 per unit (e.g. lab and field supplies). For each grant year, provide an itemized list of projected supply expenditures, the dollar amount for each item, and describe how it will support the purpose and goal of the project.
 - B. *Equipment*: Itemize and justify all equipment purchases. Describe any special purpose equipment to be purchased or rented under the grant. For the purpose of this program, special purpose equipment is tangible, nonexpendable, personal property having a useful life of more than 1 year and an acquisition cost that equals or exceeds \$5,000 per unit and is used only for research, scientific, or other technical activities.

- C. *Travel*: The maximum travel rates allowable are the rates in effect at the time of travel as established by the California Department of Human Resources (CalHR). Exceptions: Colleges and Universities must comply with their institution's travel policies. For each grant year, itemize and indicate the following information, if applicable, for each trip:
- (a) destination;
 - (b) purpose of trip;
 - (c) number of trips;
 - (d) identify travelers;
 - (e) number of days traveling;
 - (f) estimated airfare costs;
 - (g) estimated ground transportation costs;
 - (h) estimated lodging and meals costs; and,
 - (i) estimated mileage rate.
- D. *Professional/Consultant Services*: Identify and explain any and all work or services to be sub-granted. For each grant year and individual contractor/consultant, indicate the flat fee or hourly rate to be applied. Provide a short description of services and itemize categories (personnel, fringe, travel, equipment, supplies, etc).
- E. *Other Direct Costs*: Identify and explain any additional expenses not covered by the above categories. Other expenses include, but are not limited to: conferences or meetings, communications, speaker/trainer fees, publication costs, data collection, and other budgeted costs associated with the project.
- F. *Indirect Cost*: Indirect costs are any costs that are incurred for common or joint objectives that therefore cannot be readily identified with an individual project, program, or organizational activity. Indirect costs are limited to 10% on personnel costs (salaries and benefits) only.
3. Other Funding Sources. Indicate if any Federal, State or other grant program(s) are providing funding for this project. Identify the Federal, State agency or organization administering the program(s), and the amount(s) of funds requested/awarded.

H. BUDGET TEMPLATE (*not included in the 12-page maximum*)

Prepare a budget table for the project using the attached 2015 CDFA DDRDP Research Proposal Budget Template Excel spreadsheet. The template uses formulae to automatically generate totals as numbers are entered into the fields; do not alter the formatting or formulae in the unshaded cells. An example of a completed budget is included with the template. **Budgets submitted without using the template will not be accepted.** Assume a project start date of August 2015 and show amounts requested for each of the following categories. Amounts indicated in the budget template must be consistent with the budget narrative provided.

I. APPENDICES (not included in the 12-page maximum)

1. Project Leaders.

Include a two-page resume and list of recent publications. Also include a description of current research/outreach activities; provide information on all current, planned, pending, and recent projects, whether or not there is a specific time commitment and how it will impact the proposed project.

2. Cooperators.

Include a letter from each cooperator describing their role in the project, estimated time commitment, and statement of agreement to participate in the project. Scanned copies of letters are acceptable if attached to the proposal at submission time.

3. Supporters.

Include a letter from each supporter explaining the rationale for their support. Scanned copies of letters are acceptable if attached to the proposal at submission time.

9. EVALUATION CRITERIA

The criteria for peer review are outlined below.

CRITERIA FOR PEER-REVIEW
<p>Significance and Impact</p> <ul style="list-style-type: none">• Does the project address an important problem or a critical barrier to progress in the field of dairy digesters and GHG emissions reduction?• How will successful completion of the aims change the concepts, methods, technologies or services that drive this field? Will this research contribute to increased adaptation of dairy digesters in California and reduce GHG emissions?
<p>Innovation</p> <ul style="list-style-type: none">• Does the project duplicate work done previously?• Are the concepts, approaches or methodologies novel to the field of research or in the broad sense? OR Is a refinement, improvement or new application of theoretical concepts, methodologies, instrumentation, etc. proposed?
<p>Approach</p> <ul style="list-style-type: none">• Are the project objectives clearly formulated?• Are the overall strategy, experimental or field-work methodology, and analyses methods well-reasoned and appropriate to accomplish the objectives of the project?• Are potential problems, alternative strategies and benchmarks for success presented?• Can the work presented be accomplished in the proposed timeline?

<ul style="list-style-type: none"> • If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed?
<p>GHG Emissions Reduction</p> <ul style="list-style-type: none"> • Is the methodology used to measure GHG emissions reduction (and/or GHG fluxes as necessary) technically sound and well-justified? • Is the quantified GHG emissions reduction proposed in the project reasonably estimated? • Is the emissions reduction presented in the project achievable using the described approaches?
<p>Investigator(s)</p> <ul style="list-style-type: none"> • Are the project leaders, cooperators and other researchers well-suited to the project? • Early stage/new investigators: Do they have appropriate training and experience? • Established investigators: Have they demonstrated an ongoing record of accomplishments that have advanced their field(s)? • Collaborative/multi leader project: Do the investigators have complementary and integrated expertise and their leadership approach/governance and organizational structure appropriate for the project?
<p>Resources Available</p> <ul style="list-style-type: none"> • Will the scientific environment in which the work will be done contribute to the probability of success? • Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed? • Will the project especially benefit from the unique features of the scientific environment and/or collaborative arrangements?

Criteria for the DDRDP TAC review are detailed below.

CRITERIA FOR TAC REVIEW	MAX. POINTS
<p>Proposal Quality</p> <ul style="list-style-type: none"> • Project Summary: Concisely defines the problem, states project objectives, describes the approach to be used, and identifies criteria that will be used to evaluate the project's success. • Objectives: Provides a clear and concise statement of each objective. 	25

<ul style="list-style-type: none"> • Work Plans and Methods: Work plan for each year is organized by tasks and sub-tasks and includes milestones. Explains data gathering, parameters, and methods of analysis. • Project Management, Evaluation, and Outreach: Describes participants' roles, evaluation metrics, and qualifying outreach component. • Additional information includes required information for project leaders, cooperators, and supporters. 	
<p>Project Justification</p> <ul style="list-style-type: none"> • Justification: Defines/describes the problem, explains impact on a local/regional/statewide level, indicates potential contribution to long-term problem resolution, describes previously conducted related research, and specifies new information to be generated. • Relevance to Research Priorities: Clearly states how the project addresses 2015 DDRDP Research Priorities and advances the widespread implementation of dairy digesters and GHG emissions reduction in California's dairy sector. 	20
<p>GHG Emissions Reduction</p> <ul style="list-style-type: none"> • Is the GHG emissions reduction proposed in the project reasonably estimated? • Is the emissions reduction presented in the project achievable using the described approaches? 	20
<p>Feasibility and Impact</p> <ul style="list-style-type: none"> • Project is manageable within proposed framework of budget, time and personnel. • Project has potential to have an important contribution or impact regarding dairy digester implementation and GHG emissions reduction in California dairy sector. • Project objectives are clear, well stated and achievable. • Project results or products will have high potential for widespread adoption and practical application for dairy digesters in California and GHG emissions reduction. 	20
<p>Fiscal Merit</p> <ul style="list-style-type: none"> • Project's budget is detailed, reasonable and accurate. • Budget Narrative: Itemizes, describes, and justifies all project expenses. • All available matching funds are identified. 	15
Total Points	100