**CT RC&D Climate Smart Agriculture Grant Narrative**

Please answer the questions below regarding the project for which you are applying. We ask that you keep the formatting provided, using 1” margins and Calibri font size 12. The grant narrative may be no longer than five pages maximum. We strongly suggest applicants place equal weight per question.

1. **Introduction and Overview**

Introduce yourself and your organization to the reviewers. Include information such as:

* An overview of your history and mission.
* How long you’ve been in business.
* A brief description of agricultural experience/background.
* An overview of your operation that includes growing methods, what you produce and how many acres are in production on your farm. How has this changed over the years, and why?
* Any impacts climate change has had on your farm.
* Long-term farming plans.
* Any previous project experience/partnerships with CT RC&D.

1. **Project Explanation**

Explain in detail your project proposal, how it will address climate smart farming through **on-farm energy projects (energy efficiency & renewable energy) and/or soil health equipment and practices**, and how the completion of this project will impact your business. Please answer:

* What are the key points of this project and why should it be supported?
* What area of the farm (percentage, acreage) will this project affect?
* What climate smart practice do you plan to implement as part of this grant?
* Why was this specific practice chosen for your project and what is its importance to your farm operation?
* How will this project directly support the implementation of climate-smart farming practices here in Connecticut?
* How will the grant funds be used to implement the project?
* Will there be staff/volunteer time dedicated to implementing/installing this project? If so, provide detail.

1. **Project Impact\***

***\*For the purposes of this grant, an impact is defined as an objective and specific result that can be quantitatively measured and reported.***

Consider one or more impacts that you strive to achieve through completing this project. We encourage you to be as precise and detailed as possible, and to consider impacts that are **measurable**, realistic, achievable, and can be tracked and reported as results to CT RC&D in semi-annual and final reporting. Examples of impacts include, but are not limited to, carbon emission reduction, increased production, decreased fertilizer application, decreased electricity usages, reduction in water usage.

Please consider the following questions when describing your project’s impacts:

* What **measurable result(s)** are you seeking through this project?
* What actions must be taken to meet each measurable result?
* What is the process for measuring each impact? What tools and/or methods will you be using?
* How will the farm benefit from the project long term (the next 3-5 years)?
* How will the project make the farm more climate resilient?
* What are the long-lasting benefits of this project for climate smart agriculture in CT and climate as a whole?
* What are the long-lasting benefits of this project for the stakeholders, community, and state?

**EXAMPLES OF MEASURABLE PROJECT IMPACTS**

**Soil Health Equipment and/or Practice Projects**

In addition to providing pre-and post- project implementation soil health testing results, please provide measurable data such as acres impacted, liters of manure reduced, etc. The COMET-Planner (<http://comet-planner.com/>) is a tool to evaluate the potential carbon sequestration and greenhouse gas reductions from adopting NRCS Conservation Practices. We strongly recommend reporting this value for your soil health project. Below is an example of how using COMET-Planner can estimate carbon sequestration and greenhouse gas reductions by implementing no-till practices:

*Per an NRCS farmer study, the average farm uses over 6 gallons of diesel fuel per acre per year. Implementing no-till requires less than 2 gallons of fuel per acre per year. Purchasing a \_\_\_\_\_\_\_\_ will enable a 42-acre farm to reduce an estimated 252 gallons of diesel to 84 gallons. This will provide both environmental and economic savings. One gallon of diesel fuel emits 22.44 pounds of CO2 when combusted, so a 42-acre farm implementing no-till will save an estimated 3,770 pounds of CO2 from being emitted per year. Also, at an estimated $4.6/gallon of diesel fuel, a 42-acre farm will save $773 in annual diesel costs.*

**Energy Projects**

To determine the impact of implementing an on-farm energy efficiency and/or renewable energy project, we strongly recommend you estimate and report **both** the energy units (gallons of fuel, kWh saved or produced, Therms, etc.) and capital saved annually. Energy units of savings can be converted on EPA’s [Greenhouse Gas Equivalencies Calculator | US EPA](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator) to calculate the tons of carbon dioxide being reduced as a result of project implementation. Below is an example of how using US EPA’s Greenhouse Gas Equivalencies Calculator can estimate energy units as tons of carbon dioxide being reduced by replacing fluorescent bulbs with LED bulbs:

*Changing 52 two-lamp fixtures from T-8 fluorescent bulbs to linear LED bulbs saved 6,666 kWh and $624 in energy annually, and another 84 T-8 fluorescent bulbs in different fixtures to linear LEDs saved 2,232 kWh and resulted in $336 in energy savings annually. According to the EPA’s Greenhouse Gas Equivalencies Calculator, an estimated 6.3 metric tons of Carbon Dioxide emissions will be reduced annually.*