January 20, 2022

**National Biodiesel Board – Report of Activities October – December 2021**

Project: Environmental Analysis

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**1. Summarize progress toward project objectives and milestones achieved.**

 **(*In the write-up, identify specific objectives and milestones from your project proposal*.)**

**First round of Zero Carbon Rotation**

Contractor Sharon Bard completed her first round of modeling a life-cycle net-zero carbon soy and corn rotation. She modeled this using who different methods and sets of tools, completing a comparative analysis between the two tools. The results were very surprising to say the least and are being communicated and reviewed by the creators of the tools – USDA and DOE.

Additionally, this work will be expanded upon and leveraged this year with groups like World Wildlife Fund, US Farmers and Ranchers, American Farmland Trust, and other groups which we are seeking to build supportive engagements with.

These results will be integrated into regulator presentations the Environmental Analysis program provides to our QSSB funders.

We will continue to validate and build upon this work with the goal of putting the farmer in the driver’s seat of any potential on-farm carbon credit opportunities.

**Completed review of manuscript for new LCA**

During 2021 the National Biodiesel Board coordinated with Argonne National Lab, USDA, DOE, North American Renders Association, and several member biofuel producers to complete one of the most comprehensive updates to the life cycle assessment of biodiesel and renewable diesel. Last quarter, the finalized analysis took the shape of a manuscript. NBB and a third-party consultant worked with Argonne National Lab to edit and revise the manuscript for academic publication.

**Completed survey design with NOPA**

Although the Argonne National Lab LCA described above was groundbreaking in the completeness of the analysis, it still was missing one critical data point. Updated emissions on the crushing of oilseeds – in particular soy. NBB, along with USB, NOPA, and a third-party consultant are conducting a survey of the oilseed crush industry to update this information. Last quarter the various parties worked together to design and refine a survey template to be used by the crush industry.

**2. List activities such as workshops, training sessions, planning sessions, media events, etc.**

**Sustainability Workshop**

In October the Environmental Science program held the annual sustainability workshop. The workshop in 2020 was cancelled due to COVID. Over the course of two days the workshop held four different tracks with a number of speakers.

* + Low Carbon Agriculture
	+ Reducing emissions at the biorefinery
	+ Corporate sustainability
	+ Sustainable aviation fuel

The event was very successful, generating over 50 participants in person and virtually. Presentations of note were from USDA on their NRCS program, Tufts University on jet engine emissions, Dr. Sharon Bard on net-zero corn and soy rotation (project above), and the US Dairy Stewardship initiative on how an association can create environmental opportunities for members.

**Annual Planning Meeting**

In October the Environmental Science Program and two key contractors held a day long discussion in St. Louis to wrap up FY21 and plan for FY22. This also served as a great opportunity for all three of us to meet in person, which up to this time had not been possible due to COVID. The discussion centered around three areas of potential research and outreach: increased focus on the human health benefits of replacing fossil fuels with biofuels, continued focus in driving toward net zero, and a more deliberate push on environmental communications and partnerships with external organizations. This time was also utilized to make final plans for the 2021 Sustainability Workshop.

**Membership Meeting**

NBB hosted our membership in Washington DC this quarter. The program took the time to schedule several meetings with members to discuss their environmental issues. The program was also able to provide an end of year update to the membership and solicit feedback for topics of importance for 2022.

**3. Describe any outreach activities including the formation of new partnerships, interaction with motor**

 **fleet operators and coordination efforts with other groups and organizations.**

**US Farmers and Ranchers Association**

NBB has begun to engage the US Farmers and Ranchers Association to see what opportunities may exist to enhance their communication efforts on biofuels. USFRA is interested including more pro-biofuel content into their messaging, with a specific target on how biofuels can increase sustainability, increase rural outcomes, and support a more resilient food system.

**World Wildlife Fund**

As a first opportunity to work with USFRA, they asked us to help them support them in a meeting with the World Wildlife Fund regarding their Plowprint analysis which claims that U.S. farmers are converting large amounts of grassland to row crop agricultural. Our goal in this initial meeting was to simply open a dialogue with WWF and better understand their analysis and methodology. This will provide us the opportunity to provide feedback and appropriate critiques. Our goal here is to build a working relationship with WWF – to the extent that is possible.

**Google**

In an effort to take a totally different approach than has been taken to date on land use and land cover change, the program has engaged Google. Google has a suite of tools available to researchers that is built on their commercial tools such as Google Map and Google Earth. We are exploring an opportunity there is to use their satellite imagery and classification algorithms

**NOLA Meeting**

The Environmental Science Program traveled to New Orleans to meet with a member producer and representatives from state soybean programs. The goal of the meeting was to introduce farmers to the renewable diesel and sustainable aviation process as it is set for a significant growth in demand.

The meeting provided a platform for NBB, soybean executives, and fuel producers to discuss strategies on lowering the carbon intensity of agricultural products and create greater demand for lipid-based biofuel.

**Ohio Grain Symposium**

In December the program presented to the Ohio Grain Symposium on the benefits of biodiesel, renewable diesel, and sustainable aviation fuel. The program gave the audience an overview of the various biofuel products, how they are produced, and what increased demand for these products will mean for farms and agricultural producers

**4. Describe any problems or unusual developments.**

N/A