

SUGGESTIONS FOR NITROGEN PROTOCOL

Submitted by Indigo Agriculture

Indigo Agriculture welcomes the opportunity to submit public comments to the Climate Action Reserve related to the revised Nitrogen Protocol. Overall, Indigo is very pleased with the new version as it greatly expands the eligible geographic area and number of crops that can earn carbon credits. This change, in addition to the fact that many requirements from Version 1 have been streamlined, will make it much easier to utilize the protocol. For this reason, we expect Indigo to develop projects that cover multiple states and crops. Listed below are some suggestions that may further assist CAR in developing the most accurate and user-friendly protocol possible.

Baseline Fertilizer Rate and Farmer Records: The baseline fertilizer rate is determined using three options, including farmer records (the preferred approach) as well as using county averages or the expert opinions from agronomic experts. The first way to determine baseline fertilizer usage is from farmer records, and in fact, "Farmer Records" is what is listed in the monitoring table for the relevant baseline parameters. We would recommend additional specificity about what constitutes a sufficient farmer record. In reality, farmers have a variety of ways of tracking fertilizer use both in the present and in the past. The primary ways are detailed spreadsheets, hand-written notebooks, field plans, and going year to year simply by memory. The basic concept behind adding more specifics is to delineate what is and what is not acceptable as a farmer record. For example, it should be stipulated that a written record is to be provided, not simply a verbal attestation by the growers themselves (as may often be the case). This will have the added benefit of encouraging farmers to keep better records. But the type of written record should be flexible and include -- but not be limited to -- notebooks, electronic spreadsheets, receipts, or field plans. Field plans are devised by farmers to provide an expectation of what is to be applied in the current crop year and if followed, can represent an accurate record of the fertilizer actually applied in previous field plans. Thus, in the monitoring table, where it states "Farmer Record", we would recommend stating something along the lines of "any written record, including but not limited to notebooks, electronic records, receipts from fertilizer suppliers and field plans".

Crop eligibility: While the crop eligibility has been greatly expanded, Indigo would recommend a process to allow currently eligible crops to expand to currently ineligible states once the data become available. We believe this process should also be available for new crops, such as rice. Indigo understands that some crops are ineligible in certain states (and some crops are not eligible all together) because of gaps in existing databases required to determine the performance standard test. But because Indigo sees nitrogen management opportunities all over the country, we would recommend CAR develop a process by which crop eligibility is expanded once data does become available – without going through the formal protocol revision process CAR is doing now. With this approach, for example, universities, state agencies or even project developers could collect the necessary PST data, which CAR and/or an independent review panel can assess. If the data meet the same criteria and quality as what is currently deemed sufficient, then crop eligibility can be expanded based on a decision by the CAR staff. Creating such a mechanism would recognize that data availability and techniques evolve rapidly and need not be constrained by an infrequent protocol review process. This approach would also encourage both

the public and private sectors to improve and augment data collection techniques to make more crops and more territory able to participate in the carbon market, potentially benefitting all market participants.

Confirmation of the Definition of “Continuous”: Section 2.2.3 of the protocol states that “the area within each field must be continuous”. Another bullet in the same section mentions excluding from the acreage roads, waterways and other physical boundaries. Although this seems minor, it can potentially cause confusion for a farmer. If a road runs through what a farmer might normally consider the same field, would the section on each side of the road be considered separate fields because they are considered non-continuous? CAR may want to consider adding a definition for continuous in the Glossary. In the Glossary, there is a definition of a field: “A delineated contiguous cropland area, utilized to produce, or physically capable to produce, a single crop or rotation of crops, for which the basic management practices are all similar.” This does not answer the question of whether a break in a cropland area from a road or stream, etc. would mean that area is not contiguous. Also, the definition of *contiguous* and *continuous* are not the same, whereas they both are used to describe a field in 2.2.3 and in the Glossary. We would assume that non-contiguous fields are acceptable – a field could be considered in the project, even if it is not immediately next to another project field. Assuming this logic is correct, Indigo would recommend removing the word “contiguous” and specifying what type of break in a cropland area would need to be present to make the field not “continuous” – and thus two fields.

New Enrollment Form Template: Because adding fields will no doubt be an important component for project expansion, we would recommend adding a New Enrollment Form template as an appendix to the Protocol.

Role of Appendices vs. the Main Document: Indigo would recommend explicitly stating that the appendices, particularly the equations in Appendix C, are for informational purposes only and not specifically required to verify projects. The presence of equations can be confusing as project developers may feel the need to complete those sections.