

# UF/IFAS Plant Nutrient Oversight Committee Meeting

## Meeting Minutes

September 5, 2024

### Attendees:

Michael Dukes, Andra Johnson, Saqib Mukhtar, Chris Gunter, Wagner Vendrame, Dean Pringle, Samira Daroub, Cheryl Mackowiak, Sanjay Shukla, Rao Mylavarapu, Eric Simonne, & Jerry Fankhauser

### Opening Remarks & Comments

Interim head for the UF/IFAS Plant Nutrient Oversight Committee (PNOC), Michael Dukes, opened the virtual meeting at 1:00 pm and welcomed all in addition to formally introducing Jay Ferrell, Interim Chair for the Agronomy Department. The minutes of the January PNOC meeting were posted both on the Teams site and also in the Outlook Calendar meeting invite. There were no comments about the minutes, but Michael did note that any comments can be passed along to him in the next week or so.

Michael then began discussing the process for nutrient rate recommendations in UF/IFAS... this process historically has been initiated by the researcher who conducts studies, then summarizes their work and publishes (Note: typically, a peer-reviewed publication) ahead of engaging with PNOC. The proposed new fertilizer rate or updated rate is then presented to PNOC for consideration. More description about this process and updates to it can be found in SharePoint (Document: IFAS Fertilizer Recommendation Process).

Samira Daroub questioned whether a peer-reviewed article was a needed step ahead of a rate consideration by PNOC... would an EDIS article suffice? Michael Dukes responded by saying that this is why we have a provisional rate recommendation – the science done makes sense and fits the commodity's production system. Michael then shared the document onscreen to highlight the proposed updated process. What is not clear at present is the timing and structure for 'public comments.' What is proposed at present is that PNOC members would vote after public comments... considering them and the material presented by the researcher. Would PNOC need to respond to every comment made over a 4-week period or rather would members just consider such input from the public? Historically, the comment process was more informal with efforts made to engage with growers and industry professionals as rate work was ongoing. The concept that PNOC is now considering is as follows:

- PNOC considers rate proposal from researcher (via submitted documents, presentation, etc.).
- Proposed new rates and/or rate changes are then posted on the UF/IFAS BMP website
- Public comments can be submitted over a 4-week period (Note: this was not historically part of the process).
- PNOC then reconvenes to discuss and vote on the proposed change.
- If the vote is "yes" (Note: simple majority needed), the rate recommendation is approved within UF/IFAS and is incorporated into EDIS documents and UF/IFAS Soil Testing Laboratory recommendations. If the vote is "no," the proposal goes back to the researchers with guidance on how to continue work with it.
- PNOC-approved rates and rate updates are then passed along to FDACS-OAWP for their consideration with BMP manual updates.

### *Questions & Comments*

Sanjay Shukla – Noted that a public comment period was brought up from growers and others due to a need for them to be more involved in this process – a more transparent process. Chris Gunter added that language about comments is critical here... accepting comments versus noting that a comment period is open. Michael responded that the proposed language for comments is that “a 4-week comment period opens”. A question came up about the value of public comments given that the research will most likely have already been published. Some comments may bring up valid questions like rate structure in a study, etc. and be something for PNOC members to consider.

Sanjay Shukla – Also brought up the issue of environmental consequences of these nutrient rate studies given that LBR statute did not state such work was to be funded. Michael responded that this is a separate question but as Chris Gunter and others noted, all of UF/IFAS rate studies seek to optimize maximum economic production with the least amount of fertilizer needed. Not optimizing economic commodity production brings up other issues (e.g., ecosystem services payments).

Samira Daroub – Noted that much of our researchers’ work is aimed at minimizing environmental impact... the use of controlled release fertilizers and adherence to the 5Rs as examples. Sanjay reinforced that more discussion is needed with nutrient rate and environmental impact efforts across commodities in the state.

Cheryl Mackowiak – UF/IFAS needs a glossary of terms because it is challenging to be all things to all stakeholders. How PNOC defines aspects of recommendations like provisional rates ahead of permanent rates. Also, names and contact information. Michael Dukes asked Cheryl to add her comments to the IFAS Fertilizer Recommendation Process document.

Eric Simonne – This discussion is the same one that PNOC dealt with back in 2006 and at that time, PNOC developed a process that would take around 8 years to adopt a rate recommendation – mostly due to having to hear from state agencies (FDACS, DEP), growers, and others. PNOC has been kicking this rate recommendation process down the road but what UF/IFAS only has is science-based recommendations... sticking to the science. Maybe we need to state what type of studies the rate recommendation was based on? We have not fully defined what exactly is a rate recommendation? The UF/IFAS Vegetable Production Handbook uses the phrase ‘the rate recommendation for successful vegetable production’. We need to just qualify what the rate recommendation was based on (study-wise). Rao Mylavarapu replied that he can assist with adding appropriate rate recommendation language leading to a better mechanism for this process.

Sanjay Shukla – The funding language from FDACS-AES does note ‘minimizing inefficiencies to the environment’ with Michael Dukes adding that for many years, all have sought to use the minimum amount of nutrients needed to get the maximum economic yield.

Michael Dukes – Rao Mylavarapu will be sending along rate recommendation language and Cheryl will work on adding definition and other language to the IFAS Fertilizer Recommendation Process document.

Saqib Mukhtar – Asked Sanjay Shukla about the existence of an advisory committee with Sanjay responding that back in 2021, Scott Angle asked him to attend meetings that were comprised of certain growers and others in industry. This was a ‘stakeholder group’ that received updates about ongoing nutrient rate research.

Samira Daroub – Asked what is the purpose of the public comments and will it take so much of the committee’s time to address ahead of finalizing and approving? Also, should PNOC consult with Dr. Angle to get his input on what this process might look like?

Michael Dukes – Believes that input from growers and others was not that formalized so he will speak with Dr. Angle and Dr. Gilbert get their input. PNOC could be overwhelmed with comments and other input if a formal comment period is part of the process. Others noted that have public comments could lead to a more politicized approval process.

Cheryl Mackowiak – PNOC needs to take a step back and think more about the approval process in terms of researcher presentations... have more time post-presentation to review ahead of voting. Sanjay Shukla agreed with this recommendation.

Eric Simonne – PNOC needs to receive public input by why doesn't the committee get public input when the studies are being designed? PNOC seems to be challenging the science after the studies are completed – this seems to be counterproductive. Maybe a public comment period before rate studies commence? These proposals would not have to be as complex but would include basic information such as proposed treatment rates, timing of applications, etc.

Samira Daroub – If PNOC does offer a public comment period, it should be straight-forward.

Michael Dukes – Good input on this public comments issue... do we stay with the old process (i.e., more organic) with recommendations communicated to organizations like FFVA and FFAA?

Chris Gunter – Stakeholders may go far beyond growers and ag. industry organizations and comments from them may need some response. Sanjay Shukla agreed with Michael Dukes adding that such comments will then become 'public record'.

Saqib Mukhtar – Coming back to the need for an advisory committee, such a group should be formalized (i.e., number of members and from where?). It could include FDACS and environmental groups.

#### *Provisional Rate Recommendations*

Michael Dukes then began discussing the issue of 'provisional rate recommendations'... these are very similar to the formal recommendations except the science does not have to be published in a peer-reviewed journal. A recent example of this includes the first 1-2 years of potato studies where researchers saw yield responses with higher rates of Phosphorus (P). Researchers doing rate studies bring initial results to PNOC for provisional rate approval. There may be a concern in that without any sunset language, there could be a number of provisional rates for certain commodities moving forward. The proposed language in the IFAS Fertilizer Recommendation Process document is 'provisional rate recommendations will sunset after one year unless reinstated and may not be reinstated more than one time (two years total for a provisional rate recommendation).' Thoughts and reactions...

Sanjay Shukla – Maybe not box in this provisional nutrient rate process as getting to a final rate may take more time. A provisional rate for 2-3 years may make more sense given state agency contract and other challenges. Michael Dukes countered that this seems to be a long time but again, Sanjay was concerned that a 1-year provisional rate window may not be doable.

Michael Dukes – Noted that FDACS-OAWP can reject a UF/IFAS rate recommendation but that has not happened in years. Sanjay's comments about having 2 years of study data as a benchmark makes sense.

Samira Daroub – Questioned why there might be a public comment period for provisional rates – provisional is not permanent. Michael responded that this comment period mirrors the full rate process and does provide transparency.

Cheryl Mackowiak – Provisional rates are more temporary but a time to allow for comments and also for stakeholders to see what longer-term rate recommendations could be.

Michael Dukes – Based on comments from committee members, public comment periods have more challenges than advantages. What Michael is hearing from all today is PNOC needs to effectively communicate with our stakeholders but not offer a formal public comment period.

#### *UF/IFAS EDIS Rate Recommendation Format*

Michael Dukes then pointed the committee to [the EDIS recommendation format link](#) that he provided. This format was created by Tom Obreza and there are 4-5 rate recommendation update documents that have been or are ready to release. The goal was and remains to distill the information down to 1-2 pages and this simplified version is now on the UF/IFAS BMP website. Is this a good way to get nutrient rate updates communicated?

Samira Daroub – Liked the simplified version but would also recommend providing a link to the peer-reviewed publication.

Cheryl Mackowiak – The simplified version seems to have been written for commercial growers so others may not fully understand the recommendations.

Michael Dukes – All these simplified EDIS documents (sort of like fact sheets) would eventually be compiled into one document. Michael then asked Cheryl to provide some wording recommendations for these simplified documents.

Sanjay Shukla – Tom Obreza spent a lot of time creating this simplified document template in part because growers were finding conflicting or difficult-to-find information.

Saqib Mukhtar – Suggested that the simplified documents currently on the BMP website be converted into a 1-2-page (printable) fact sheet. Being easily printable will allow UF/IFAS County Extension Offices the ability to make hard copies available.

Michael Dukes – It might make sense to just have 1-2 pager on the BMP website. Approved EDIS documents take some time, so the fact sheet format may offer better readability and accessibility. Question though... if the fact sheet is just a distilled version of an approved EDIS document on the website, we still cannot get updated fact sheets out until there is a peer-reviewed publication leading to a full EDIS document, right? Samira Daroub replied and noted that waiting for an approved EDIS document is not necessarily required because the researcher(s) will have a peer-reviewed publication on the rate studies.

Sanjay Shukla – How would PNOC handle communicating a provisional rate recommendation? Michael responded that that such temporary rate approvals will go the fact sheet route.

#### *Nutrient Management Effort Update*

Michael Dukes then shifted conversation towards an update on the overall nutrient management effort. The current fiscal year contract is in place including the sub-accounts with no gap in funding. The previous two contracts terminated last week (i.e., end of August). In terms of closing out those two contracts, Michael has sent the final report to FDACS-AES, and they have accepted it. He is also working on a final legislative report for Mary Ann Hooks to use. He has been working with others in UF/IFAS administration and (through Rob Gilbert) BOT chairperson, Mori Hosseini, to ask for the next round of

nutrient management rate funding legislatively instead of through FDACS-AES due to the time-consuming contractual process. Going this route will give us more flexibility like the opportunity for carry forward. This effort is ongoing at present.

In terms of provisional recommendations, Michael expects to see presentations for tomato, potato, snap bean, and possibly sod. PNOC will be busy with these rate update recommendation presentations.

Sanjay Shukla – If UF/IFAS does put provisional rates online and on fact sheets, make sure that 'provisional' is prominently noted along with a time stamp.

Samira Daroub – What happens to the funds from the past two contracts that were not spent? Michael answer that those funds are reverted back to the state legislature, but UF/IFAS does not get the money upfront as these contracts are structured as cost reimbursement. Michael added that for a variety of reasons discussed previously, over \$1.5 million reverted back to the state. Certainly, only having fund availability for 9 months makes it difficult to recruit and hire students and staff to assist with studies. Finally, it was noted that this is a challenge for all state-funded universities (i.e., year-to-year contracts).

#### *Research Data Repository & Curation*

Dean Pringle talked about a position that NFREC is working with FDACS to fund and support. This stems from the need to capture historical research study data. Bob Hochmuth at NFREC-SV has had success working with FDACS to fund specific project-specific positions via grants at that location. He approached Kathryn Holland with FDACS-OAWP about this need and she noted that they are talking about how to bring all their office's data together into a common database (for all FDACS-OAWP projects). Seeking -a win-win opportunity, Dean and FDACS-OAWP continued discussions, and he believes that the proposal is now in UFIRST awaiting signatures.

At the 30,000-foot level, this effort is a FAIR one... Findable, Accessible, Interoperable, and Reusable. The data would end up being available to others to go in and conduct meta-analysis and other things of that nature. Working for FDACS-OAWP, Dr. Gerrit Hoogenboom and Dr. White in UF/IFAS Ag. & Biological Engineering put together a templated spreadsheet for data curation. This template seeks to capture most of the needed information for data acquired from (past) research studies. The deliverables agreed to with FDACS-OAWP include monthly meetings between NFREC researchers and the onsite farm manager to ensure that all protocols and projects are captured and entered into the database, ensuring that the resulting datasets are complete, and reports are completed. NFREC will soon be seeking to hire someone with at least a B.S. degree.

Michael Dukes thanked Dean for this update and noted that his effort with FDACS-OAWP sort of sets the stage for what can be done with data on the nutrient management side. Michael then asked Jerry Fankhauser for an update on Damian Adams request for input on statistical consulting. Jerry has not been part of those meetings so it will be best to follow up with Damian directly. Samira Daroub then talked about different aspects of the EXCEL templated spreadsheet... what are the units with varied data and what is in the spreadsheet is important. Michael responded by noting that this template is more of a guide than a final data curation product.

Michael Dukes then mentioned the water proposal that UF/IFAS submitted on behalf of 10 of other state universities – this was for the Florida Council of 100 request. This proposal was all about data and an effort to get this data into a hub. The idea of putting all existing data into such a hub is complicated by a needed translational step – this can be automated but UF/IFAS needs a data curation warehousing service. This need is in addition to the statistical consulting service in UF/IFAS. UF Health started this

effort 15 years ago and now they are hiring faculty that are going to the database and mine it (in lieu of conducting their own research) and then publish papers.

*Other Items*

Michael Dukes then updated the committee on other items including any need for nutrient management updates at the Florida State Horticultural Society and Florida ASABE meetings in 2025. Sanjay spoke up and noted that ASABE has asked for such updates next year. Folks from FDACS in addition to some growers and others attend this meeting. Sanjay added we (UF/IFAS) are organizing statewide stakeholder meetings and have done so since 2021. Dr. Angle has tried to attend these meetings which includes leadership from Florida Farm Bureau, FFVA, FFAA, and others. Michael asked that Sanjay pass along those meeting details when they become available.

In terms of future PNOC meetings, there is nothing scheduled on the 2025 calendar at present but maybe a January-February meeting ought to be firmed up soon? There is a January 14-16, 2025, nutrient management retreat at Citra (PSREU). Samira Daroub asked if we could combine the meeting with the retreat? Michael responded that this can be done and maybe on the afternoon of the third day (January 16<sup>th</sup>) or possibly on the morning of the 14<sup>th</sup> ahead of the retreat – the latter was agreeable to all. Michael then asked if a June meeting timeframe works for most but maybe May would be better. Later in May might work and also avoid a planned UF/IFAS symposium on May 12-14<sup>th</sup>. A fall 2025 meeting will most likely be needed... maybe one in September with a follow up meeting in October. Getting meetings scheduled quickly with a quorum is nearly impossible, so PNOC should seek to receive presentation materials weeks ahead of a scheduled meeting from researchers who have completed their work. Doing so will allow for a more thorough review of results and better meeting flow.

Saqib Mukhtar – Thanked Michael Dukes for accepting this interim PNOC leader position and this overall effort.

Samira Daroub – Inquired about the status of the nutrient management faculty position. Michael responded that the position description is about finished.

With no other comments or questions, Michael Dukes thanked all for attending and the meeting was adjourned at 2:45 pm.

Submitted by: Jerry Fankhauser