

**CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE (Department)
FERTILIZER INSPECTION ADVISORY BOARD (FIAB)
DEPARTMENT OF CANNABIS CONTROL, 2750 GATEWAY OAKS DRIVE,
SACRAMENTO / HYBRID**

**June 26, 2024
9:00 AM – 12:00 PM**

MINUTES

BOARD MEMBERS

Andrew Larson
Chris Gallo
David McEuen
Gary Silveria (Vice Chair)
Greg Cunningham
Gus Olson
Jake Evans
Melissa McQueen (Chair)
William Oglesby

CDFA STAFF

Amadou Ba
Barzin Moradi
Brittnie Williams
Dale Rice
Elizabeth Moseby
Elsa Poon
Joseph Donohue
Karen Adler
Kelsey Dodd
Kris Gulliver
Leo Campos
Liam Erskine
Maria Tenorio Alfred
Mark Cady
Mia Humphreys
Minal Patel
Natalie Krout-Greenberg
Nick Young
Nicole Smith
Teresa Bowers
Zach Edmonds

INTERESTED PARTIES

Michele Jay-Russell
Renee Pinel

INTRODUCTIONS AND ANNOUNCEMENTS

Melissa McQueen, Chair, called the meeting to order at 9:04 AM and self-introductions were made.

ROLL CALL – ESTABLISH QUORUM

Roll was taken and a quorum was established.

APPROVE FEBRUARY 8, 2024, MEETING MINUTES

Chair McQueen requested the board review the minutes from the February 8, 2024, FIAB meeting.

MOTION: Jake Evans moved to approve the minutes as presented; Chris Gallo seconded. The motion passed unanimously by all board members present with a vote of 7 to 0.

DEPARTMENT / DIVISION / BRANCH UPDATES

Dr. Amadou Ba provided Department, Division, and Branch updates. Dr. Ba announced three retirements within the Fertilizing Materials Inspection Program (FMIP). Dr. Martin Burger, former Senior Environmental Scientist (SES) (Supervisory) for the FMIP registration unit, retired April 1, 2024. Patrick Barbree, former Environmental Scientist (ES), retired May 30, 2024. Mike Gingles, Special Investigator in Fresno County, will retire on August 1, 2024. Liam Erskine, ES, new hire to state service started with the FMIP on April 15, 2024. Joseph Donohue, Agricultural Aide for the Fertilizer Research and Education Program (FREP), also a new hire to state service, was appointed on June 19, 2024.

Dr. Ba informed the FIAB of the current state budget mandate to reduce program budget operational costs. An example would be an 8% reduction in operational costs to the FMIP and Organic Input Material (OIM) program. Details to come on if the percentage reduction will apply to general or industry funded programs once the Budget Act has passed. The Governor's mandate of 10,000 vacant positions could potentially be swept due to budget shortfall. Potential delays of monies may come to the Department. The \$25 million directed to the Department's Office of Environmental Farming and Innovation (OEFI) could be delayed until fiscal year (FY) 2026/27. The Division's Office of Farm to Fork, general funded program, could be impacted.

Gus Olson arrived at 9:12 a.m.

Dr. Ba presented, Senate Bill (SB) 1522, introduced by Committee on Agriculture, would revise the definition of fertilizing materials to mean any commercial fertilizer, agricultural mineral, beneficial substance, or organic input material. The bill would also define the term "beneficial substance". Assembly Bill (AB) 2902 could impact the Feed program. This bill would extend the rural jurisdiction exemption until January 1, 2037, except as provided, and would require the department collaborate with CalRecycle, which may include adoption of regulations or outreach regarding incentivization of food diversion to highest and best use. More direct impacts in the Food and Agricultural Code are the sunset extension languages pertaining to the Feed program through SB 1367. License fees now sunset every year for a five-year period.

The 2024 State of the Science Summit: Reducing Methane from Animal Agriculture was May 21-22, 2024, at University of California, Davis (UCD). The purpose of the Summit is to understand the current scientific and regulatory landscape related to feed additives and strategies to reduce enteric emissions and identify opportunities for collaboration and research that will help the dairy and beef industries meet climate goals. Dairy, beef academia, the United States Department of Agriculture and the Food and Drug Administration (FDA) are engaged in the reduction of methane emissions.

David McEuen arrived at 9:19 a.m.

Dr. Ba announced a Subject Matter Expert Review Panel on Nitrogenous Emission from Soils with Dr. William Horwath, Dr. Whendee Silver, Dr. Xia Zhu-Barker, Dr. Martin Burger, and Dr. Viney Aneja. These technical experts will conduct a comprehensive review of scientific literature, databases, and emission methodologies that pertain to nitrogenous emissions from soils and provide California Air Resources Board (CARB) guidance on the steps needed to improve nitrogenous emissions in California. The first workshop held on May 7, 2024, had 92 in attendance.

PROGRAM UPDATES

Nick Young, FMIP's Environmental Program Manager (EPM I), introduced newly appointed ES, Liam Erskine. Erskine has a Bachelor of Science degree in Horticulture/Plant Science from Pennsylvania State University. Erskine has been an excellent addition to the registration unit. Kelsey Dodd, Associate Governmental Program Analyst who has been with the Branch for several years, has been doing increasingly more fertilizer duties. Dodd is the analyst for the fertilizer licensing desk and tracking initiatives for field staff, as well as Public Information Act requests. Michele Jay-Russell, UCD's Western Institute for Food Safety and Security Program Manager for the Western Center for Food Safety, has been a great resource for the pilot pathogen study for salmonella to be presented later in the agenda.

Young reported FMIP fund conditions and mill assessment. As of July 1, 2023, the beginning balance of Commercial Fertilizer was \$8.56 million and OIM was \$3.5 million for a combined total of \$12 million. The reduction of mill assessment impact is shown in the Commercial Fertilizer funds. The adjusted balance for Commercial Fertilizer is \$5.74 million and OIM is \$2.70 million with a combined total of \$8.44 million. SB 1522 could allow the FIAB flexibility in changing the mill assessment moving forward, if the bill is passed in January.

Mill assessment trends for FY 2023/24 at 2.5 mill totaled \$6,735,456. This trend aligns with prior years' mill assessment trends of \$8,144,819.

FREP had a beginning balance of \$8.3 million. Revenue was \$2.2 million; expenditures were \$2.1 million; and encumbrances for grants through June 30, 2024, totaled \$3.5 million. As of April 30, 2024, FREP's ending adjusted balance was \$4.8 million.

Young presented FMIP's reorganization plan proposal to the FIAB. The proposal is to hire two separate FMIP registration supervisors into two parallel groups for the Conventional Fertilizer and OIM programs. The proposal would simply backfill one SES (Supervisory) position (prior Dr. Burger's) and then reclassify an existing vacant ES position to the SES (Supervisory) position. The registration staff has doubled over the last 10 years due to the increased OIM and Conventional Fertilizer workloads of

registered labels and applications. Registration staff are currently assigned to either OIM or conventional reviews, so re-organization would not disrupt workloads. OIM reviews are more comprehensive and requires a secondary review equal to the first. The benefits of the re-organization are: a minimal budget impact of \$4,147 net increase in monthly salary, both SES (Supervisory) positions would guide six to eight staff each, no new positions to be created, the reorganization aligns with a more realistic, manageable staff to supervise effectively, more supervisory time for one-on-one training, guidance, oversight and support, increased supervisory staff to perform critical efficacy data review and the ability for supervisors to be more proactive.

Discussion ensued regarding the analysis and proactive approach put forth in the FMIP reorganization proposal.

Chair McQueen announced FIAB approval of the FMIP reorganization proposal as presented.

Young presented the FMIP's request of three FIAB members to serve on a Fertilizer Rulemaking Advisory Subcommittee to provide guidance on future rulemaking proposals and recommendations to new/revised regulations to FIAB. Meetings would be virtual on an as needed basis and via email communications.

A potential proposal for rulemaking change would be nutrient disclosure on Fertilizer labels. Existing regulations for primary nutrient (Nitrogen, Phosphorus and Potassium) labeling suggest any presence of primary nutrients require a guaranteed analysis. No minimum guarantee is required for NPK, and claims may be required at extremely low contaminant levels where no primary nutrient is being added. However, it is not the case for secondary and micronutrients because regulations state, "if claimed" and possess a minimum guarantee. Existing regulations are vague and unclear. The Department currently does not require lab analysis submission for nutrients. Possible solutions would either be disclosure should be determined by the manufacturer, create a threshold requirement, only provide an exemption for contaminants or enforce current regulations where NPK label disclosure is required in all circumstances for any amount.

Jake Evans inquired about having potential representation from FIAB member's firm that would be more qualified to participate on the Fertilizer Rulemaking Advisory Subcommittee. Dr. Ba responded, stating that subject matter experts may be involved with the FIAB member for them to present the firm's guidance and feedback to the subcommittee.

Greg Cunningham, William Oglesby, and Jake Evans volunteered to be on the Fertilizer Rulemaking Advisory Subcommittee.

FIAB discussed label requirements for NPK and agreed with nutrient disclosure on labels "if claimed".

The Association of American Plant Food Control Officials (AAPFCO) Summer Annual Conference is August 5-6, 2024, in San Antonio, Texas. Kris Gulliver, FMIP SES (Specialist), is the newly appointed Chairman of the Terms and Definitions Committee. Kris also serves as the Chairman of the Slow Release Fertilizer Committee under Laboratory Services.

Young presented Fertilizer registration updates. FMIP continues discussion on how to capture data that represents where in the turnaround time process is the initial review, pending firm review and how long it is with the firm until it is received by program. The challenge will be capturing each time there is a resubmission with label changes or documentation along the chain where it is with program needing review and approval. FMIP continues to work on the information and figuring out process improvements.

Young reported FMIP registration status as of May 31, 2024, highlighting a 10% increase for OIM and 0.5% decrease with conventional fertilizer registrations. Since May of 2023 there have been 342+ OIM approvals and an 81+ increase for data revisions required (awaiting from firm). A comparison of total OIM and conventional fertilizer labels by year to present time shows a 28% increase of OIM labels and 4% increase of Conventional Fertilizer labels since 2019. FMIP has maintained the pace for label reviews.

Young stated FMIP will be transitioning away from the prior metrics data previously presented by former SES (Supervisory), Dr. Burger. FMIP has been working on a better way to identify turnaround times and capture this type of data.

Nicole Smith, SES (Supervisory), reported as of June 12, 2024, there were a total of 611 samples: 280 conventional fertilizer and 331 OIM. Smith announced a total of 13 Notice of Proposed Actions (NOPA) were received in 2023: 12 paid and one unpaid with a judgment filed.

Young added, an administrative law judge has upheld a penalty of \$1.89 million plus investigative costs against Agro Research International, LLC, for adulteration and mislabeling of registered organic fertilizing material Agro Gold WS. Agri Research International, LLC did not appeal. The next steps are to come from the Department of Justice.

Smith reported a total of seven NOPAs were received as of June 12, 2024; three paid and four awaiting firm response. A total of 20 complaints were received in 2023: 19 closed and one pending further investigation. A total of 12 complaints were received as of June 12, 2024: three closed and nine pending further investigation. Six of the complaints received this year were regarding mushroom kits.

Smith gave an overview of the pathogen pilot study initiated in May of 2023 with a goal of 400 samples. The study was to determine if *salmonella sp.* was present in various organic fertilizer products according to specific ingredient inputs. FMIP evaluated products containing meals, processed animal manures, microbes, carbohydrates and biosolids. Samples were analyzed at the UCD Western Center for Food Safety. FMIP field staff obtained a total of 403 samples in California. The total manufacturers guarantor samples were 123. There was 27 total detections and 13 manufacturers guarantors with detections, and nine detections above the National Organic Program (NOP) processed animal manure threshold of 3mpn/4g. Smith reported 24 of the 27 detections contain bone meal with outliers including biosolid, cottonseed meal and greenwaste compost. Smith noted 15 of the 27 detections are products containing only bone meal and 23 of the detections were OIM and four detections were conventional fertilizer noting that 11 detections did not have a lot number.

Smith further presented a table illustrating the detections that were above and below the NOP animal manure threshold, noting positive serotype results. Of the OIM products that were sampled from suppliers, there were no detections.

Jay-Russell commented on the complication with taxonomy of salmonella. The detections show a lot of diversity on the serial bars or same species. The diversity means that there is no one point source or one feed stock. Jay-Russell further explained the findings of the results.

Evans inquired about the necessity of a threshold and potential to have a lot number system and mitigation program.

Young commented, stating a threshold would probably be needed but that FMIP seeks FIAB direction on the potential next steps such as obtaining feedback from the FDA or the California Department of Public Health (CDPH).

Evans asked FMIP's continued surveillance of the products that pose threats to human health and safety. Young stated, FMIP can continue surveillance, but it would require a new contract.

Jay-Russell commented, stating very few labs have the capability to test for salmonella on a quantitative level (i.e. the number of mpn/g, most probable number per gram). Most labs test for presence versus absence or identify the species/strain. Jay-Russell expressed the challenge of finding a lab with a laboratory protocol with a mpn program or ability to test quantitatively. There are other external labs outside of California that have protocols like UCD Western Center for Food Safety protocol for serotyping.

Young stated the biggest challenge moving forward are laboratory aspects and the requirement of a regulatory lab for program enforcement.

Dr. Ba commented, the absence of regulatory labs is a problem, and the standard is a big part in advising the importance of education and outreach where field staff can

provide proper follow up on mitigation of risk. Dr. Ba stated the Department's priority is to provide outreach and education to industry, recommending this be part of the regulatory subcommittee discussion. Bringing in FDA in this space could bring value, if FIAB deems necessary or if FIAB/FMIP decide regulatory framework the program search for a regulatory lab. It is up to the FIAB to discuss and advise FMIP on the best way forward.

Evans suggested FMIP present study results to FDA for potential regulatory framework and continue surveillance.

Chair McQueen commented on program efficiency on providing such data, mentioning if FMIP needs to take more steps to analysis with the handling or processing of these products before seeking guidance from FDA.

Jay-Russell commented, FDA consultation can be approached to someone like David Ingram to get an opinion on risk regulations.

Evans suggested FMIP obtain advice from FDA then determine how to help industry by mandating risk mitigation procedures and lot numbers to ensure public safety.

FMIP requests FIAB recommendation to FMIP for the next steps based on the study results.

FIAB recommendation is for FMIP to go to FDA for insight on potential risks and CDPH for risk assessment. Vice Chair Silveria also suggested a FMIP provide consultation service to the firm so that it is less daunting to manufacturers.

Evans asked FMIP if continued surveillance with standard detection over three mpn/g is an option or if it is a lab challenge. Smith responded, stating it is a lab challenge and would require a contract for continued lab analysis. The NOP standard of three mpn per four grams is also only valid for processed animal manure, not bone meal or other inputs.

Jay-Russell commented, stating she is in search of another laboratory to take on this type of analysis. Jay-Russell will continue involvement with this analysis and advised FMIP inform CDPH and seek consultation with FDA due to regulatory concern. Jay-Russell explained the advantage of a detection lab in testing several samples in bone meal.

Young expressed the key importance would be for FMIP to seek consultation and expert advice.

Mark Cady, FREP SES (Supervisory), provided updates on FREP and the Technical Advisory Subcommittee (TASC). Cady announced full proposals were submitted on April 15. FREP received and reviewed 39 concept proposals; eight projects moved to full proposal phase but only six full proposals were received and reviewed by TASC on May 30. TASC recommended five proposals for funding:

- 1) Determination of crop N-removal coefficient values for the Imperial and Coachella Valleys crop systems by Ali Montazar from the University of California (UC) Cooperative Extension Imperial County. Nitrogen removal at harvest from a crop.
- 2) A science-based and interactive website for nutrient management in organic crop production by Daniel Geisseler from UC Davis. Resource for end users to be efficient with organic materials which will be an addition to the California fertilization guidelines.
- 3) Monitoring and assessing variability of nutrient status in almond orchards with hyperspectral satellite imagery empowered by artificial intelligence by Yufang Jin, Patrick Brown and Alireza Pourreza from UC Davis. Focus of in-field variability of nutrient availability. Understanding nutrient status of the whole orchard and variability within through remote sensing. Comparison of hyperspectral imaging and AI with the field sampling.
- 4) Equity in Nutrient Management Education on the Central Coast of California by Nathan Harkleroad from the Agriculture and Land-Based Training Association. Incubator for new farmers graduating from farm work status to owner operator status on farms.
- 5) Development of Three Citrus Modules in the Decision Support Tool CropManage for Orange, Mandarin, and Lemon by Ken Miller, Southern San Joaquin Valley Management Practices Evaluation Program Technical Program Manager. Using CropManage for help citrus growers to be more efficient.

TASC recommends \$1,149,096 in total funding for over a three-year period.

Cady requested a motion to approve the TASC proposals recommendation.

MOTION: Jake Evans moved to approve the TASC proposals for funding; Gary Silveria second. The motion passed unanimously by all board members present with a vote of 9 to 0.

Cady updated FIAB on the FREP's grower training program that allows for farmers to certify their own irrigation and nutrient management plans. Growers can now access training online to obtain certification. Cady reported a total of 2,547 eligible growers and 126 newly eligible growers since the start of the program in March of 2023. A total of

385 growers has since participated in one or more self-study Continuing Education course(s).

Cady presented metrics data for the Nitrogen and Irrigation Initiative that illustrates results from UCD's evaluation of the program by looking at workshop participants and the value of workshops. The report provides a summary and program highlights, including practical services for growers, program operations, outreach activities, program evaluation, and early outcomes and long-term impacts of the program.

Chair McQueen asked about feedback on effectiveness of program for getting the growers at risk to understand these requirements.

Cady responded, stating FREP is working with UCD and coalition partners to help target those growers and farmers to readily adapt to the evolving regulations and make necessary changes.

The FREP/Western Plant Health Association Nutrient Management Conference is October 29-30, 2024, in Seaside, California. The conference will hold a tour of an in-field bioreactor that takes effluent from tile drains high in nitrate and biologically processes with wood chips on a field scale for nitrate reduction within maximum contaminant level.

CENTER FOR ANALYTICAL CHEMISTRY (CAC) LAB UPDATE

Teresa Bowers, Environmental Program Manager I of CAC, introduced Elsa Poon, newly appointed SES (Supervisory) for CAC's regulatory analysis unit, who started on May 1, 2024. Poon has served as an ES with the Department's Food Safety Program with a lot of chemistry experience and leadership skills.

Bowers reported from July 1, 2023, through March 31, 2024, CAC received a total of 4,157 with an average turnaround time of 14 days. This is due in part of CAC not having had a direct supervisor during that period. During January 1, 2024, through March 31, 2024, CAC processed a total of 1,411 assays with an average turnaround time of 12 days. Bowers reported turnaround times in April and May continued to trend downward, averaging 11 days. As of July 1, 2023, CAC has processed a total of 676 samples; 90.1% were routine samples and 9.9% were priority samples. Beginning January 1, 2024, CAC processed a total of 158 samples; 93.6% were routine samples and 6.4% were priority samples.

Bowers highlighted, CAC typically has an average of four assays completed per sample; however, it has been 5.5 assays completed per sample. Despite the increased number of assays per sample, CAC will challenge itself to achieve a 10-day turnaround time.

Bowers reported sample turnaround times have trended downward from 14 to 12 business days. CAC's laboratory remodel project to modernize and improve CAC infrastructure is about 95% complete. The remodel was designed to allow CAC to shift and improve with the ever-evolving technologies in analytical chemistry. This \$265,000 project is entirely funded by CAC building funds, no fertilizer funds were used. CAC's new sulfur analyzer is awaiting installation to serve as a secondary backup instrument. The new micro Kjeldahl has been installed and verified to serve as backup and promote sample throughput. Bowers mentioned tremendous efforts on part of Poon and other CAC staff to cross train the five regulatory analysis unit staff to improve coverage on the analysis of all different assays.

FIAB CHAIR AND VICE CHAIR RECOMMENDATION

Chair McQueen expressed the importance of allowing FIAB members the opportunity to serve as a FIAB Chair and Vice Chair. Chair McQueen requested for volunteers or recommendations. Vice Chair Silveria expressed interest in serving as Chair for the FIAB.

Dr. Ba inquired about Chair McQueen interest in serving as Vice Chair. Vice Chair Silveria inquired about Chris Gallo serving as Vice Chair.

MOTION: Jake Evans moved to approve Gary Silveria as Chair and Chris Gallo as Vice Chair of the FIAB; Gus Olson seconded. The motion passed unanimously by all board members present with a vote of 7 to 0. Gary Silveria and Chris Gallo abstained.

PUBLIC COMMENTS

There were no public comments.

AGENDA ITEMS FOR FUTURE MEETINGS

Gulliver will provide an update on tonnage reporting at the next FIAB meeting.

NEXT MEETING

The next meeting will be held on Wednesday, October 23, 2024, in Sacramento, California.

ADJOURNMENT

The meeting was adjourned at 11:55 AM.

MOTION: Gary Silveria moved to adjourn the meeting; Gus Olson seconded. The motion passed unanimously by all board members present with a vote of 9 to 0.

ORIGINAL SIGNED BY NICK YOUNG

Nick Young
Environmental Program Manager I
Fertilizing Materials Inspection Program

06/26/2024

Date