

Dairy Innovation Hub Advisory Council

April 26, 2023

Meeting minutes

Notes by Elisabeth Berndt

Participants In-Person: Heather White (DIH), Maria Woldt (DIH), Elisabeth Berndt (DIH), Steve Kelm (UW-River Falls), Tera Montgomery (UW-Platteville), Chuck Steiner (UW-Platteville), Chuck Nicholson (UW-Madison), Randy Romanski (DATCP), John Umhoefer (WCMA), Shelly Mayer (PDPW), Dave Daniels (WFBF), Larry Baumann (UW-River Falls)

Participants Virtually: Scott Rankin (UW-Madison)

Absent: Dean Olson (UW-River Falls), Mitch Breunig (PDPW), Glenda Gillaspay (UW-Madison), Aric Dieter (DBA)

Proxy: Troy Runge (UW-Madison), John Haag (PDPW), Chad Zuleger (DBA), Ashley Andre (DATCP)

In person at WFBF, Madison & virtual Zoom meeting.

Dave Daniels called the meeting to order at 10:05 a.m.

Approval of Minutes: (1.23.23 meeting) A motion to approve the minutes as presented was made by Shelly Mayer, Chuck Nicholson seconded. All were in favor. The minutes were approved.

Dave provided the meeting overview and welcomed everyone.

Council member updates: Each council member provided a working update from their areas/departments since the January 23rd meeting.

University reps: Tera Montgomery shared that DIH was recognized in many ways among industry and campus partners at the "Pioneer Dairy Classic." Pioneer Sweets is partnering with athletics to sell ice cream during sporting events. Lastly, planning for the dairy pilot plant is underway.

Heather White received many inquiries about DIH while on a research trip to the central valley of California. Scott Rankin also shared that DIH efforts are attracting attention at the national level. Chuck Nicholson will be presenting his DIH research at "UW Day @ the Capitol" later this afternoon. He is also working with economists nation-wide to plan a conference for dairy economists from academia, industry, and trade groups. Madison will host this event in October on campus.

Industry/association representatives: Shelly Mayer shared that PDPW wrapped up the 2023 business conference. Planning for the 2023-24 fiscal year is in motion; outreach with sustainability in the dairy sector continues to be a priority. DIH continues to compliment the WI dairy industry nicely.

John Haag, the newly elected president on the PDPW board of directors, shared that DIH has been a tremendous "boom" in the state, and he is grateful for DIH efforts.

Chad Zuleger commented that DBA continues to inform policy/law makers on sustainability and water quality issues, specifically cover crops. DIH was featured at “Advocacy day at the capitol” where law makers promoted the budget and the Hub’s work.

John Umhoefer shared that WCMA is expanding the board to 16 people. Cheese Con (April 4-6, 2023) had a record attendance of 2,700 people; some attendees were escorted to Babcock Hall to view the renovated space. The farm bill is granting additional funding for DBIA; \$20M through USDA for farmers and dairy producers across 11 states with several grantees representing Wisconsin. Overall, it is great to see Hub interfacing at various events around Wisconsin and nationally.

Dave Daniels, representing WFBF, emphasized DIH’s impactful work to promote dairy in Wisconsin and beyond. The American Farm Bureau Annual Convention, held in Puerto Rico this past January, focused on dairy policy and “back on the farm” concepts. Many farmers hope to seed crops this week, weather dependent. The milk market tumbled this past week.

DATCP: Sec. Romanski commented that DIH brings people together as Wisconsin continues to “connect the dots” on state, national, and international levels. New faces at various events and meetings are a reminder of DIH positive influences.

The governor’s budget continues to maintain DIH funding and major investments for dairy processor grants. Food security is also in the budget due to the limited remaining federal funds; Wisconsin is trying to connect people who need assistance directly to Wisconsin products. Legislative hearings and voting on the final budget will happen soon.

Ag exports continue to increase; the last two years have been extremely high. Another trade mission to the UK is scheduled this summer.

The residential farm industry short course (FISC) program moved to UW-River Falls, and the admission application launched this past semester. Applications are currently being accepted.

Campus updates and Hub highlights: Heather offered a priming on the new format for Deans reports. She emphasized that components of storytelling will be used when relaying DIH data and research project updates. In addition to overall campus updates, campus leaders will focus on the highlights of funding: past, present, and future.

Madison (CALs Associate Dean for Research Troy Runge): Troy Runge served as proxy for Dean Gillaspay. He reported the following updates and funding projects.

- **Overall updates**
 - Babcock Hall hosted an open house for the public on April 14th that was well attended. On April 13th, Chancellor Mnookin recognized donors to the project; Sec. Romanski attended the event.
 - Short-term, high-impact projects continue to launch with quick, visual impacts. Innovation starts larger conversations and often leads to leveraged funds (federal funding) allowing dairy to relate to many areas of study.
 - UW-Madison continues to support eight Hub-funded hires.

- **First funding:** Denise Ney, department of nutritional sciences, conducted a human subjects trial for a cheese-derived shake to help postmenopausal women lose weight and build bone.
 - WARF patented the shake, and it has been acquired by a major dairy company.
 - DIH extended the project to look at other human benefits from the product.
 - The project went from small population impact to making larger impacts.
- **Current funding:** Hilario Mantovani, department of animal and dairy sciences, is working on antibiotic-free or reduced therapies for bovine mastitis.
 - Untreated and undertreated mastitis impacts farm profitability and animal welfare.
 - Antibiotic use raises public concern; antibiotics do become resistant over time.
- **Future funding:** Beef X dairy crossbred calf housing are being installed at the Arlington Ag Research Station.
 - Seventy-two new individual calf panes will establish a calf rearing facility in underutilized space.
 - This project will expand calf studies by increasing flexibility through group housing options, and will implement more practical research.

Platteville (BILSA Interim Dean, Chuck Steiner): Chuck Steiner provided the following updates for overall operations and funding projects.

- **Overall updates**
 - The chancellor search is now complete; Tammy Evetovich will be the 15th chancellor for UW-Platteville; she is a strong advocate for DIH and Pioneer Farm. The Lt. Gov. Rodriguez recently visited Pioneer Farm.
 - Tera Montgomery has been named the new School of Agriculture director and will begin this role on July 1st. Rami Reddy will return to faculty status in June.
 - Enrollment numbers are increasing in the School of Agriculture while the budget is facing a one-time deficit.
- **First funding:** John Obielodan and Joseph Wu, department of mechanical engineering and chemistry, are exploring the ideas of converting casein in waste milk and whey from cheese by-product to make filaments for the ever-growing 3D printing sector.
 - A patent application was published for the process.
 - The project demonstrates durability of products and meets product criteria.
- **Current funding:** Joseph Sanford, School of Agriculture, is evaluating biochar incorporation into two manure management systems: manure storages and anaerobic digestion.
 - The process reduces production of GHG and mitigates odors that increases profitability of anaerobic digestion and improves biogas quality.
 - The project combines USDA & DIH funding.
 - Integration with biochar in anaerobic digester systems in small and large batches may reduce hydrogen sulfide concentrations.
- **Future funding:** Krista Eiseman and Dong Isbister, School of Agriculture & women and gender studies, will evaluate female to male enrollment ratios throughout Wisconsin's different institution types.
 - The project will create messaging for pre-college and current students.
 - The project will look at components as to why students may be transitioning from post-secondary education to industry.

River Falls (CAFES Professors Steve Kelm & Larry Baumann): Kelm & Baumann served as proxies for Interim Dean Olson. They commented on the following updates and funding projects.

- **Overall updates**
 - The RFP processes for research fellowships (7 projects, \$100K awarded funds) and capital projects (6 projects, \$600K awarded funds and lab renovations) recently closed.
 - The new CAFES Dean, Michael Orth, begins his deanship on June 1.
 - The dairy pilot plant project hopes to be running by Oct. 1; BOR will be visiting campus.
 - The FISC program capped enrollment at 24 spaces. A soft release of the program drew 40 inquiries; more press releases will launch soon.
 - Application fees for incoming students have been waived; yield rates will be hard to predict.
 - The first Hub-funded graduate student, Kaylee Riesgraf, successfully defended her thesis on Monday.
- **First funding:** Albert Boaitay, department of agricultural economics, worked to increase understanding of perception and knowledge gaps between consumers and farmers on animal welfare topics.
 - This data can be used to increase farmers' understanding of consumer perspective and incremental improvements on the farm.
 - The management of cow/calf pairs and the consumer perceptions from this project have been identified to have a national impact.
- **Current funding:** Luis Pena-Levano, agricultural economics, is studying the financial, environmental, and social impacts of adopting robotic milking systems on dairy farms.
 - Surveys were sent to approximately 3,000 dairy farmers in Wisconsin.
 - The long-term economic analysis and cost benefits of AMS systems are being explored.
- **Future funding:** Sylvia Kehoe, department of animal and food science, is studying the effects of using calf jackets on performance and health of purebred and crossbred dairy calves in different rearing environments.
 - There is little to no literature that address the question: *When should I put a coat on a calf? At what temperature or condition?*
 - The project will investigate different times in weather and calf weight gain to determine the best time to put blankets on calves.

Special guests: Hub-funded faculty overviews: The following speakers shared overviews of their current research and hopes for future projects.

- **Margaric Kalcic:** Associate professor in the department of biological systems engineering at UW-Madison. Her research focuses on agricultural hydrology and water quality modeling.
- **Hilario Mantovani:** Assistant professor in the department of animal and dairy sciences at UW-Madison. His research focuses on rumen microbial physiology.

Break for LUNCH

Information and discussion: Remaining faculty hiring opportunities at each campus: Heather began discussion on remaining DIH faculty hires on all three campuses.

The topic of discussion served as a follow-up from the brainstorming discussion from the meeting in Nov. (2022). DIH is currently searching for 5 positions across three of the four priority areas. Some primary priority areas overlap as research is not limited to just one area. The following positions were summarized.

- UW-Madison: Positions were proposal based and voted upon by the steering committee.
 - **Adaptive dairy cattle nutritionist** (Ensuring animal health and welfare): The position will focus on the impact of droughts and heat stress on nutrition and how it affects the cow.
 - **Soil carbon scientist** (Stewarding land and water): The position will work with existing capacity in the priority area.
 - **Agroecological plant breeding** (Growing farm business and community): The position will focus on strategic plant breeding.
- UW-Platteville
 - **Agribusiness** (Growing farm business and community): The position was created anticipating an upcoming retirements that will bring people together around the dairy plant project and will focus on teaching and research.
- UW-River Falls (Ensuring animal health and welfare)
 - **Dairy health and management** (Ensuring animal health and welfare): The search features a strong candidate pool; two candidates are coming to campus soon. Position will begin fall 2023.

Discussion: Hub-funded faculty hires must be tenure track positions with some teaching incorporated within the PVL. Positions are not intended to be “back-fill” positions. Due to changing careers throughout the tenure process, DIH faculty positions follow less formal, traditional appointments. DIH hires are intended to incorporate outreach and research within their appointments, and are usually limited to one class per semester.

Newly created positions must focus majorly on dairy and must build programs to attract and retain research talent. If a Hub-funded faculty hire is not producing enough research in the dairy space (gathered by bi-annual outcome reporting), safety nets and agreements are in place for the college(s) to assume funding. If Hub funding is eliminated, tenure track faculty are still committed to each University by which UW systems must follow legislative rules.

Administrative and Hub updates: Heather and Maria provided FY23 preliminary outcome data from the PI mid-year self-reporting (July-December 2022) survey.

Overview of projects:

- 118 publications accepted or submitted
- 141 presentations given by Hub PIs
- 324 students and trainees engaged in Hub-funded research (204 undergrad, 120 other)
- \$4.08M in leveraged funding for Hub researchers
- 80 farm, processor, business visits
- 14% of all respondents included a formal, quantitative, economic analysis as part of their project

Potential impact of research project outcomes:

- 71% improve farm profit

- 53% lower farm costs of production
- 74% improve quality of life for Wisconsin communities
- 66% improve environmental outcomes
- 62% expansion of business opportunities

Discussion: DIH has been successful quicker than anticipated. Even though lab renovations are costly, the return on investment is long-term.

Barriers or challenges experienced during projects:

- Aspects of the project didn't go as planned (technical issues, equipment, design)
- Supply chain problems
- Differing needs of farmers vs. consultants
- Weather
- Labor (shortage, competition, staffing, changes, student transitions)

Discussion: This question was used to “gauge a pulse” for challenges (if any) and is not meant to remain in outcome reporting long-term.

The challenges above only represented thirty percent of PIs. Among the thirty percent of the PIs, the issues above were described. It was noted that seventy percent of PIs did not report challenges.

Hub upcoming events: Maria provided an overview of the following events.

Recap of Dairy Day @ the Capitol on Wed., April 19 in Madison.

DIH posters on the rotunda was successful. Many posters were staffed with researchers who engaged with legislators.

Dairy Symposium on May 18, 2023, from 8:00 a.m. – 5:30 p.m. in Madison

The event will be hosted at the Pyle Center, UW-Madison. The morning plenary keynote speaker is Dr. Alison Van Eenennaam from UC-Davis. This springtime DIH event places emphasis on an academic and faculty audience. The event will not be live-streamed, but on-demand viewing will be offered after the event.

Dairy Summit on November 15, 2023, in Platteville

This event will be hosted in Velzy Commons, Ullsvick Hall at UW-Platteville. This annual fall event is formatted for a public audience; farmers are encouraged to attend. An open reception may be offered for all attendees on Nov. 14.

Motion to adjourn the meeting: A motion to adjourn the meeting was made by Steve Kelm. Shelly Mayer seconded the motion. All were in favor. The meeting was adjourned by consensus at 2:05 p.m.

Future meetings: The next meeting is Mon., Aug. 14, 10:00 a.m. – 2:30 p.m., Arlington Ag Research Station. The last meeting date of 2023 is Tues., Nov. 14 in-person in Platteville at the Markee Pioneer Student Center.