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Team Talk

- Our first all-team meeting via web conferencing will be on **Dec. 17th at 11:00 Eastern Standard Time (10:00 am Central Standard Time)**. Team leaders should send 3 slides to cbetz@wisc.edu by 3 pm on Dec. 16th as discussed in previous emails. To join in, see slides and hear audio, log into Blackboard by going to <https://sas.elluminate.com/m.jnlp?sid=1304&password=M.CA6BB521C02ECD7E1D0C9AEC2FAB28>. *Please be sure to test this out at least 15 minutes ahead of time* because you may need to add Java to your computer.
- Year 2 of the Dairy CAP begins on February 14, 2014. We haven't received official word on funding yet, but we anticipate everything will proceed as planned. Those of you who will have funding for the first time will be called soon by Matt or Carolyn, checking in about gearing up, getting ready to hire students, post-docs or technicians and starting your research.
- Matt Ruark, Carolyn Betz, Sarah Collier, Jerry Hatfield and other PIs will attend a National CAP meeting in Gainesville, Florida, January 6 -9. The Dairy CAP will have a poster presentation on display and contribute to a book that will be produced as part of the meeting.
- The modelers (Objective 2) met via conference call on December 9th to discuss data input and output and will be using data from a New York farm for model comparison purposes. The modelers are ready to get to work.
- The Extension Team (Objective 4) has met several times via conference call.
- Students from Vincent High School in Milwaukee will be coming to visit the UW-Madison School of Veterinarian Medicine on Friday, Dec. 13. Gail Kraus, who works with the Dairy CAP on Objective 5a (developing an agricultural curriculum at the high school level), will accompany the group. They will meet with Co-Director Molly Jahn during lunch.
- If your team would like help setting up a call, contact cbetz@wisc.edu.

PIs in the News

Company says it can help farmers weather changes AgriNews

Thursday, December 05, 2013 3:00 PM LEAWOOD, Kan. (AP)

Farmers may not be able to change increasingly wild weather swings, but a data-crunching company

with an office in eastern Kansas said it can help them predict and adapt to them. Climate Corp., which was purchased recently by St. Louis-based agricultural giant Monsanto for \$1 billion, uses massive amounts of data to develop hyper-local weather forecasts to insure crops and advise farmers. Climate Corp. produces forecasts from weather readings at 10 million locations that are matched with 40 years of national crop-yield statistics. Its forecasts include rain, soil conditions and wind speed.

“We’re moving into a period of very unstable weather, and that’s what producers need to be prepared for,” said **Jerry Hatfield**, lab director of the U.S. Department of Agriculture’s National Laboratory for Agriculture and the Environment. [Read more of this story.](#)

Manure Digester Spills in Wisconsin

Wisconsin State Journal - Dec. 8, 2013

A Dane County biodigester that holds millions of gallons of animal waste was built without a containment berm encircling an above-ground pipe that burst last month and let loose one of the largest Wisconsin manure spills on record.

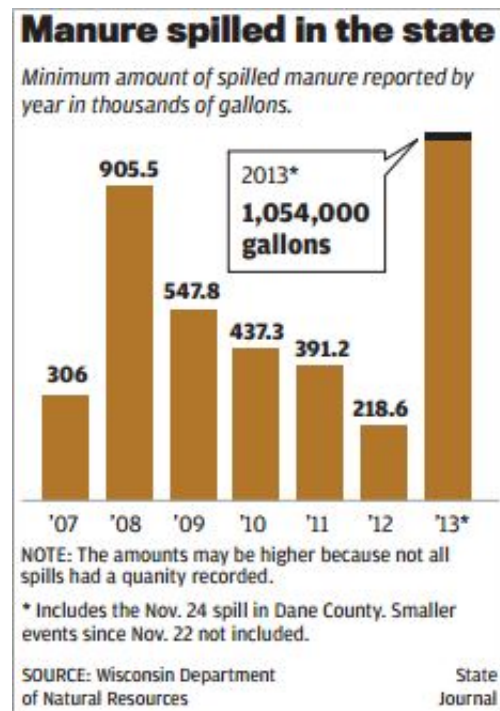
It was the second 300,000-gallon release this year at a manure storage facility with no berm to hold all the spillage, no employees on duty to notice the rupture and no automated shutoffs or alarms that worked.

Great quantities of manure have become more concentrated geographically with the rise of larger dairy farms, Murphy said. Farmers spread it on fields as fertilizer, but it can’t be done year-round, so millions of gallons must be stored — pumped through pipes into lagoons or tanks, or sent for processing at biodigesters — creating new hazards when a system fails, he said.

“It creates a whole new category of opportunity and risk,” Murphy said. “The ultimate answer is cost. You must do things in the most cost-effective method for the businesses.”

While building berms could be costly, simple shutoff devices and alarms aren’t very expensive, said **Rebecca Larson**, a UW-Madison biosystems engineering professor. “Much less than the cleanup cost, I’ll tell you that,” Larson said.

[Read more.](#)



Other News

Can biotech crops save us from climate change?

Biotechnology may help offset the effects of climate change and help increase food production, according to the International Service for the Acquisition of Agri-biotech Applications (ISAAA).

"Biotech crops, for the last 16 years of commercialization, have been contributing to the reduction of carbon dioxide emissions," notes an ISAAA briefing paper, "Biotechnology and Climate Change." The publication adds that biotech crops - often called "genetically modified organisms" or GMOs, and which include soybean, corn, cotton, and canola - have allowed farmers "to use less and environmentally friendly energy and fertilizer, and practice soil carbon sequestration."

[Read more here.](#)

LCA - Energy demand analysis as a sustainability indicator in dairy production

A cradle to farm-gate study of 22 dairy farms in Ireland by the Livestock Systems Research Department, Animal & Grassland Research and Innovation Centre found that energy demand to produce a litre of milk averaged 2.5 MJ/L of milk produced, ranging from 1.25 to 3.90 MJ/L, of which 20% was direct and 80% was indirect energy.

- Fertilizer: there were large differences in the chemical fertilizer application rates in this study. Mean energy input by chemical fertilizer was 1.14 MJ/L (range 0.87-2.44 MJ/L). The main fertilizer applied was chemical fertilizer nitrogen.
- Feed: The average farm fed 542 kg of feed per milking cow per annum, which equated to 0.5 MJ/L of milk produced.
- Electricity: consumption was centred around milk harvesting operations, with 80% of electricity being consumed in the milking parlour and the remaining 20% being used by water pumps and the winter housing facilities. Electricity consumption amounted to 0.31 MJ/L.
- Fuel: this accounted for 66% of total fuel energy input and amounted to 0.2 MJ/L. These inputs were specifically: diesel (97.5% of on-farm fuel use), gear oil and transmission oil (1.3%) and kerosene (1.2%). Fuel used by contractors accounted for 31.7% of fuel use and transport of feed, fertilizers and forage to the farm accounted for just 2.3% of fuel use.

[Read the story on page 12.](#)



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