

Media Relations

UNH Launches Joint Sustainable Agro-Ecosystems Lab With Chinese Academy

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DURHAM, N.H. – The University of New Hampshire has launched a joint research laboratory with the Chinese Academy of Agricultural Sciences (CAAS) to promote international research in agricultural development and the environment, announced Tom Brady, dean of the College of Life Sciences and Agriculture (COLSA) at UNH recently. The laboratory will be located on the campus of the CAAS Institute for Agricultural Resources and Regional Planning (IARRP) in Beijing.

The new laboratory, called the CAAS-UNH Joint Laboratory for Sustainable Agro-Ecosystems Research, will conduct academic exchanges and cooperate in science and technology research.

The two institutions have collaborated in the past through the efforts of UNH scientist Changsheng Li, who developed a mathematical ecosystem model known as the DeNitrification-DeComposition or DNDC model that today is used by nations worldwide to help assess agro-ecosystem carbon, nitrogen and water cycling in the context of climate and global change.

“At this particular time, when China has risen to the status a major world power, it is of great advantage to our students and faculty and well as the Chinese to be able to work together on problems related to better understanding the biogeochemistry of agricultural settings during this period of rapid climate change,” says Brady. “The establishment of this joint laboratory is absolutely in line with UNH’s strategic plan, with its emphasis on internationalizing the university.”

Brady traveled to CAAS in Beijing earlier this month with research professors Li, Steve Froelking, and associate professor Scott Ollinger of the Complex Systems Research Center at UNH’s Institute for the Study of Earth, Oceans and Space (EOS). The trip was the final step in formalizing a collaboration in which UNH and CAAS scientists will conduct research on a host of topics from crop yields to the specific environmental impacts of large-scale agricultural production.

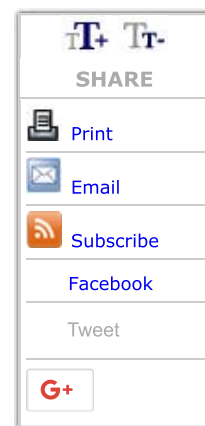
According to Li, the formal, joint collaboration will take advantage of research synergies the two institutions can tap into in the wake of a recent shift in Chinese agricultural policy.

“In China, agricultural studies have long been focused only on crop yield but since Chinese agricultural practices have caused severe environmental pollution, including water eutrophication, air pollution, and greenhouse gas emissions, the government finally decided to think not only about crop yield but the impacts on environmental health and safety,” says Li, who holds an additional appointment to the department of natural resources and the environment at UNH. “That’s a big change and it has created a new demand for research.”

The UNH and CAAS researchers’ initial focus will continue to revolve around the DNDC model and new data will be gathered and synthesized to broaden the model’s capabilities for China’s specific needs. One of the most challenging and critical aspects of such work is developing the means to “scale up” data gathered locally and regionally to national and global levels and, in the context of global climate change, derive potential mitigation strategies to maximize crop yields while at the same time effectively managing and protecting water, soil, and air resources.

Participants agreed that, as the collaboration strengthens, the range of research will broaden to other areas, particularly in agronomy (plant breeding, dairy science and livestock, genomics applications in agriculture), but also additional topics of common interest and relevance to the Joint Lab mission of sustainable agro-ecosystems.

The University of New Hampshire, founded in 1866, is a world-class public research university with the feel of



a New England liberal arts college. A land, sea, and space-grant university, UNH is the state's flagship public institution, enrolling 12,200 undergraduate and 2,300 graduate students.

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