



Boosting Milk Production One Micro Dairy at a Time

Virginia Miori, Ph.D., assistant professor of decision and system sciences, is thinking a lot about milk these days. She has boosted milk production and cut costs at two micro dairies with plans for installing her model at eight more dairies across the country. Her secret — a production scheduling model she developed to change the way farmers process the milk we drink.

Over the course of one month, Miori has increased each micro dairy's output by seven percent, amounting to 3,300 additional gallons of milk and almost 240,000 additional gallons annually. These are significant numbers, given the pressures on the industry.

“Dairy farmers across the country are burdened with the cost of producing milk and keeping up with consumer demand,” explained Miori. Improvements in equipment technologies and the re-design of the one-gallon milk jug sold to wholesalers have alleviated some of these pressures, but she says significant improvements are still needed.

When Miori examined the production lines at each of the micro dairies, she realized how a scheduling model that she originally developed for the trucking industry could improve their operating efficiencies.

When micro dairies process milk, they take into consideration consumers' preferences — ranging from type of milk to packaging. The production line typically runs according to product type. “Milk is initially produced in two variations:

skim and whole,” said Miori. “All varieties of milk can be produced through adjusting the ratios of whole and skim released by filling machines.”

By looking closely at this process, Miori was able to identify lags in the production line. “When the milk is run according to type, several transitions take place,” she explained. “Transitions in the dairy operation take the form of cleaning cycles and packaging in single, two-packs or four-packs of gallons.”

Miori's scheduling model shifted the traditional practice of running the production based on milk type to a process where the milk is produced according to transition. Once her schedule was implemented, dairy farmers saw an 82 percent reduction in unproductive time and more than a 71 percent reduction in the number of transitions.

Brian Polaski of RoviSys, an automation company that sells and works directly with micro dairies to implement Miori's schedule, said the best thing about the model is the flexibility it offers farmers. “We work with these micro dairies to optimize their operations. Miori's model accomplishes this objective, while giving the micro dairies an opportunity to tailor the schedule to their specific needs.”

As these micro dairies expand their operations, Polaski believes Miori's scheduling model will have an even greater impact.

Conflicting Messages on What to Eat When You're Expecting

Pregnant women often receive conflicting messages about what foods to avoid during their pregnancies. One of the most confusing health messages for women is the recommended guidelines for eating fish.

In a recent study, Nancy Childs, Ph.D., professor of food marketing, and research colleagues, warned this decreased consumption of fish among childbearing, pregnant and lactating women, and young children is likely to have detrimental consequences to public health.

“It is conservatively estimated that 73 percent, or two million women, may not be consuming enough low-mercury fish during their pregnancy,” noted Childs. “By decreasing the amount of fish they eat, rather than just minimizing their

consumption of the large fish, pregnant women are missing the advantages of this low fat, high protein component of a healthy diet.”

In 2004, the Environmental Protection Agency and the Food and Drug Administration issued a joint advisory to pregnant and nursing women warning that excessive consumption of high mercury fish can have dangerous neurological consequences to infants and young children. Methylmercury, the toxic metal found in all fish, is present at the highest levels among swordfish, shark, bluefin mackerel, tilefish and tuna.

“It's really about which fish, how much is eaten, and who is consuming the fish that's important. The ideal message will encourage the replacement of high



Childs

mercury fish with low mercury fish,” said Childs. “And until a multi-agency sophisticated consumer communication is developed, health professionals need to be diligent in educating their patients on fish consumption.”

Childs and her co-authors published “Review of Food Policy and Consumer Issues of Mercury in Fish” in the most recent issue of the *Journal of the American College of Nutrition*.

Decision and System Sciences Honored with Chapter Award

Saint Joseph's University's chapter of Alpha Iota Delta – Alpha Mu, the International Honors Society for Information Systems and Decision Sciences (DSS), was awarded Chapter of the Year during a Nov. 23 ceremony in Baltimore, MD. Ruben Mendoza, Ph.D., assistant professor of decision and system sciences, was honored at the event with the Faculty Sponsor of the Year award.

SJU's Alpha Iota Delta – Alpha Mu chapter was founded in 2006 for students pursuing a business degree in DSS and/or business intelligence. Since its formation, 52 undergraduate, graduate and faculty members have been inducted into the society. SJU's chapter operates with financial support from the Smart Group, LLC, an international business advisory, consulting and accounting organization.

Dan McDevitt '07 (B.S.) '08 (M.B.A.) was one of the first SJU students inducted into Alpha Mu, and served as vice president of the chapter for two years. "Alpha Mu recognizes students for their hard work in this field," said McDevitt. "It's a great honor to be recognized by the organization for our academic achievements." Eligibility for undergraduate DSS majors is a cumulative G.P.A. of 3.50 or more for juniors, and a G.P.A. of 3.25 or more for seniors and graduate students.

McDevitt adds that because the honor society is internationally recognized, it's a "great resume builder."

Mendoza, who was honored for his leadership, is proud of his group of students. "We are a young organization, so it's nice to receive validation that what we are doing reflects the spirit and direction the national organization wants to take."

"Personally," he reflected, "it is deeply gratifying to be recognized for the work I do with our students with the Faculty Sponsor of the Year award. I am very proud of the student officers of the Alpha Mu chapter for helping me with all activities, and for the energy and enthusiasm they bring to our collaboration."



Mendoza

Finance Professor Recognized with Distinguished Appointment



Heck

The Social Science Research Network (SSRN) recently appointed Jean Heck, Ph.D., associate professor of finance, to the advisory board of its History of Finance eJournal.

"The purpose of the journal is for financial experts and researchers to keep up-to-date on what their colleagues are doing," Heck said.

The eJournal is home to hundreds of thousands of working papers and abstracts related to finance. Academics can access the site and read posted papers as well as upload their own research.

Out of over 100,000 authors published in SSRN's eLibrary, Heck is the 786th most downloaded author in finance, a figure that puts him in the top one percent. His work, *Establishing a Pecking Order for Finance Academics: Ranking of U.S. Finance Doctoral Programs*, is the 208th most downloaded out of nearly 200,000 full text papers.

Heck joins colleagues on the board from such prestigious institutions as Harvard University, Yale University, New York University, Dartmouth College, Duke University, Columbia University and the University of Notre Dame, to name a few. Harry Markowitz, a 1990 Nobel Laureate in Economic Sciences is also a fellow board member.

A longtime member of the SSRN, Heck believes that he was chosen to join the advisory board because of his extensive expertise in the history of finance.

His Web site, econlib.com, contains over half a million citations for business and economic references from over 500 academic journals published since 1950. "I'm a reference point," Heck said. "I enjoy being able to provide others with information about research activity in the field of finance."

Hess Corporation Supports Business Education at SJU



Representatives from Hess present HSB with donation.

Hess Corporation recently donated \$25,000 to Saint Joseph's University to support student scholarships and the Erivan K. Haub School of Business' annual business policy competition.

Hess Corporation, a global integrated energy company, works closely with the Career Development Center (CDC) at Saint Joseph's to recruit students for internships and jobs. "About three years into the relationship, we became one of their preferred target schools for their retail business," said Matthew Brink, director of the CDC.

According to Brink, Hess has had very good success in hiring Saint Joseph's graduates for their management

training program. "It's rewarding to know that our graduates are so impressive that organizations are moved to support Saint Joseph's in this very generous way," he said.

As part of the donation, \$5,000 scholarships will be awarded to three undergraduate business school students. The Haub School's annual business policy competition, offered at the end of each fall and spring semester, will benefit from \$10,000.

Business policy is a course where students divide into teams of four or five and delve into various businesses and organizations to develop strategic plans for them. The teams then present the plans to their classmates and instructors at the semester's end. The best plan from each of the course's six sections advances to the business policy competition where an executive panel judges them on the content of the plans and the quality of the presentations.

According to Marcel White '07, division director of human resources for Hess' retail marketing business and a Saint Joseph's E.M.B.A. alumnus, the business policy competition is another example of Saint Joseph's commitment to preparing students for success in the business world.

"Saint Joseph's students benefit from the effectiveness of the management training program, which in turn benefits companies like Hess as we look to build a strong team," White says. "We're pleased to support Saint Joseph's business policy competition and to offer scholarships to deserving students."

'The Energy School'

Catastrophic events like the tropical storms and hurricanes that have pounded the U.S. Atlantic and Gulf coasts since 2004 have threatened our country's energy resources. "Unanticipated disasters like these, whether from natural occurrences or man-made tragedies like the Exxon Valdez oil spill or the Three Mile Island accident, create an insurance nightmare for risk managers," said Sam Cupp, executive-in-residence in risk management and insurance at Saint Joseph's.

From Oct. 19 - 24, "The Energy School," a new program at SJU, offered a forum to aid risk managers in adapting to the challenges of protecting our nation's energy companies from shattering losses like the ones Cupp described. The event was sponsored by The OIL Group of Companies, Energy Insurance Mutual Ltd., Nuclear Electric Insurance Ltd., and Saint Joseph's University's Erivan K. Haub School of Business.

Attendees of "The Energy School" were risk managers from all facets of the energy industry who spent their time interacting with colleagues and hearing remarks from government officials and energy and insurance executives. Among those speaking at the event included outgoing Department of Environmental Protection Secretary Kathleen McGinty '85, and Marsh & McLennan Chief Executive, Brian Duperreault '69.



Part of the program also included table top exercises which offered attendees an opportunity to simulate a security threat to the U.S. energy market.

"The Energy School" examined catastrophic occurrences and studied their implications for insurance policies during the conference. The agenda also included discussions of environmental issues, working through complex claims, interpretations for enterprise risk management, project financing, crisis management, general liability issues, ethics and the future of energy.

Saint Joseph's administrators participating in the conference included Joseph DiAngelo, Ed.D. '70, dean of the Haub School of Business; Sam Cupp, executive-in-residence in risk management and insurance; Tim Boyce of the Early Responders Distance Learning Center; John McCall, Ph.D., director of the Pedro Arrupe Center for Business Ethics and professor of management and philosophy; and David Steingard, Ph.D., assistant director of the Arrupe Center and assistant professor of management.

Executives from Towers Perrin, Aon Risk Services of Texas, Nexen, Inc., The OIL Group of Companies, Exelon Corp., Sunoco, Dempsey Partners, Energy Insurance Mutual Ltd., and Nuclear Electric Insurance Ltd. also spoke at the event.