



MU News Bureau

Daily Clips Packet

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UM President Mun Choi is making a difference

By HANK J WATERS III

It's good to have an outspoken university president in our midst. Not only is he able to talk to us in practical terms about the health of our largest econo-cultural enterprise, he occasionally sends us into a realm of unfamiliar cogitation. So it was the other day when he discussed a recent consultant's report about the efficiency of the university's administrative functions.

To my great pleasure he was reiterating his consistent call for reallocation of resources. Choi said the goal is to make the entire enterprise more efficient so resources could be made available for enhancing academic excellence, but then he sent a semantic wake-up call: "We have to figure out what are the right changes that support that academic mission and priorities. Changes for changes' sake causes entropy."

I will confess the arrival of the word "entropy" sent me to my dictionary to make sure what he meant.

I quickly decided he did not literally invoke the primary definition of the word: "a measure of the unavailable energy in a closed thermodynamic system so related to the state of the system that a change in the measure varies with change in the ratio of the increment of heat taken in to the absolute temperature at which it is absorbed."

So I quickly hied to the last, most pedestrian definition Webster provided: "the steady degradation or disorganization of a system or society." Choi does not intend to make "change for change's sake," lest the campus enterprise be made worse instead of better.

Choi was not here when earlier failed fudges toward reallocation occurred, but obviously he knows his organizational history, which surely includes examples like UM's marked more by lip service than real accomplishment, false nods in the direction of change that resulted in entropy rather than progress.

Spurred by enrollment declines and other economic challenges, the new president quickly made job cuts across the four-campus system, saving nearly \$101 million, and focused on additional savings at MU "to secure a university we can be proud of."

President Choi said unlike failed attempts of the past, “we are all brought into this,” an insightful evaluation of history and an apt recognition of the leadership required to be successful this time.

At this important moment, Rolla attorney David Steelman becomes chair of the university Board of Curators. Steelman is a provocative choice and in my mind, a good one. He is the most politically savvy, strongest pusher on the board. I’ve always like his political instincts going all the way back to his 1992 race for Missouri attorney general against Jay Nixon, who in 2015 as governor named Steelman to the university governing board. In their earlier quest for attorney general the two of them waged one of the more combative political contests in my memory. After a lot of time spent with each I endorsed Steelman in a photo finish. Nixon’s performance in the office made me happy enough with the outcome of the election but I always have been a Steelman fan.

Now he joins President Choi in implementing the next phase of UM development. The two of them will pursue a smart no-nonsense approach without trying to cut too many corners.

This does not mean their every move will meet with immediate universal approval within the academy. Effective reallocation will not be done without pushback from operators feeling left behind, but if phony change fails to pose real choices President Choi explains “entropy” will result, and no doubt curator Steelman will agree.



[How sexual misconduct costs companies millions](#)

By: Brittany De Lea

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Sexual misconduct has proven to be very costly for individuals’ reputations and careers in 2017, from Matt Lauer to Harvey Weinstein to Sen. Al Franken (D-Minn.), but individuals aren’t the only ones who feel the fallout. Executive scandals can also severely hit businesses’ bottom lines.

A study conducted by University of Missouri finance professor Adam Yore found that CEO missteps, including substance abuse, violence, dishonesty and sexual indiscretions can result in hundreds of millions of dollars' worth of financial repercussions.

Yore and his colleagues examined 325 instances of executive indiscretions and found that managerial mistakes resulted in an average loss of \$110 million in market capitalization, while CEO indiscretions were more costly at loss of \$226 million on average.

Out of the four types of indiscretions studied, Yore's study found dishonesty and violence, the latter of which was rare, to be the most damaging.

"For the majority of indiscretion types (substance abuse, violence, and dishonesty), reputational costs are the dominant factor," the study read, indicating that reputational risk was highest with cases of violence and dishonesty.

Yore told FOX Business that the mentality behind that conclusion is that if an executive is being dishonest in a certain area, how can business partners and consumers trust him or her in other areas?

"This reflects upon your truthfulness as an executive," he noted.

Meanwhile, the sexual misadventure cases studied, over half of which were sexual harassment, were less financially damaging than dishonesty cases. Yore noted that "the outward costs aren't always obvious" in these instances, but added that harassment events are often litigated. However, as noted above, reputational costs played a more significant role among respondents than direct costs.



Fewer nursing home patients are hospitalized with MU program

By: Jasmine Ramirez

Generated from News Bureau press release: [MU program to improve nursing home care](#)

reduces hospitalizations by nearly 50 percent, saving major dollars for Medicare

COLUMBIA - One MU Nursing School program has reduced the number of nursing home patients from hospitalization by nearly 50 percent.

The Missouri Quality Initiative for Nursing Homes (MOQI) applies to advanced care, new technology and places Advanced Practice Registered Nurses in nursing homes.

Curators Professor of the Sinclair School of Nursing Marilyn Rantz said the program is very effective.

"The types of things people go to the hospital with, they can be done very timely within the nursing home," Rantz said. "And with the training from the APRN the staff gets better."

For example, urinary tract infections are very common for people living in nursing homes, but if the infection is not detected early it can create more serious problems, said Nursing Professor Greg Alexander.

APRNs help guide and mentor nursing home staff to provide better treatment.

"They help build a community of caregivers that are confident in the care they are giving and are able to be a support person," Alexander said.

The program provides people better treatment inside the nursing home. Rantz said this is important because transferring a patient to the hospital is stressful and cause cause them confusion.

Alexander said avoiding hospitalization saves Medicaid and Medicare up to \$54 million a year.

Sixteen nursing homes in Missouri use the program but Rantz hopes this will expand statewide or even nationwide.

In the future they look to reimburse nursing homes that use the program.

Alexander hopes the compensation is used to improve and enhance care through, "increase staffing, maybe hire their own APRN someday, invest in technology and programs."

ST. LOUIS POST-DISPATCH



REUTERS

Monsanto offers cash to farmers who use controversial chemical

By: Tom Polansek (Reuters)

CHICAGO • Monsanto Co. will give cash back to U.S. farmers who buy a weedkiller that has been linked to widespread crop damage, offering an incentive to apply its product even as regulators in several U.S. states weigh restrictions on its use.

The incentive to use XtendiMax with VaporGrip, a herbicide based on a chemical known as dicamba, could refund farmers over half the sticker price of the product in 2018 if they spray it on soybeans Monsanto engineered to resist the weedkiller, according to company data.

The United States faced an agricultural crisis this year caused by new formulations of dicamba-based herbicides, which farmers and weed experts say harmed crops because they evaporated and drifted away from where they were sprayed.

Monsanto says XtendiMax is safe when properly applied. The company is banking on the chemical and soybean seeds engineered to resist it, called Xtend, to dominate soybean production in the United States, the world's second-largest exporter.

BASF SE and DowDuPont also sell versions of dicamba-based herbicides.

Monsanto's cash-back offer comes as federal and state regulators are requiring training for farmers who plan to spray dicamba in 2018 and limiting when it can be used. Weed specialists say the restrictions make the chemical more costly and inconvenient to apply, but Monsanto's incentive could help convince farmers to use it anyway.

"We believe cash-back incentives for using XtendiMax with VaporGrip Technology better enable growers to use a management system that represents the next level of weed control," said Ryan Rubischko, Monsanto product manager.

XtendiMax costs about \$11 per acre to buy, and Monsanto is offering an extra \$6 per acre in cash back to farmers when they apply it on Xtend soybeans, rather than using another seed-and-chemical combination to control weeds.

The rebate means farmers can receive up to \$11.50 per acre in cash back next year when they use XtendiMax along with other approved chemicals, such as one called Intact that aims to prevent drift and costs \$2.40 per acre, according to Monsanto.

The company, which launched a program offering incentives to use multiple herbicides in 2010, competes against rivals including Bayer AG to sell genetically modified soybean seeds and chemicals to farmers.

Bayer is selling its LibertyLink soybean brand, a main rival to Xtend, to BASF as part of a deal to acquire Monsanto for \$63.5 billion.

Monsanto also faces increasing government oversight.

On Monday, Missouri said it would ban sprayings of XtendiMax and DowDuPont's product, called FeXapan, in 10 counties after June 1, 2018, and statewide after July 15, 2018. Last month, the state imposed the same restrictions on BASF's dicamba herbicide, Engenia.

North Dakota said it planned to prohibit the use of dicamba herbicides after June 30, 2018, and when temperatures top 85 degrees Fahrenheit in a bid to prevent the chemical from drifting away from where it is sprayed.

Arkansas is close to prohibiting dicamba sprayings after April 15, 2018, the tightest limits yet, while Minnesota is also considering restrictions.

The states are taking action after the U.S. Environmental Protection Agency mandated special training for dicamba users for 2018 and required farmers to keep records proving they were complying with label instructions.

"Utilizing the technology, the cost will go up because of these changes," said Andrew Thostenson, a pesticide specialist for North Dakota State University.

U.S. farmers planted 90 million acres of soybeans this year, and about 4 percent showed signs of damage linked to dicamba, according to University of Missouri data. Despite that, Monsanto predicts farmers will double plantings of Xtend soybeans to about 40 million acres next year.

Farmers said its cash-back offer was designed to increase sales.

"I think they're just trying to buy more acres," Dan Henebry, an Illinois farmer who plans to grow Xtend soybeans next year, said about Monsanto.



Missouri Department of Agriculture places restrictions on Monsanto and DuPont's dicamba products

By: Eli Chen

The Missouri Department of Agriculture has extended its restrictions on dicamba herbicides to products manufactured by Monsanto and DuPont. The new rules are part of the state's effort to curb crop damage for farmers who don't use genetically modified soybeans.

In the 2018 growing season, farmers in several counties in Missouri's bootheel region will not be allowed to spray Monsanto's XtendiMax and DuPont's FeXapan on dicamba-tolerant soybean and cotton after June 1. In the rest of the state, farmers cannot apply either product after July 15. **Pesticide applicators can only spray XtendiMax and FeXapan between 7:30 a.m. and 5:30 p.m., submit daily forms to the department before every application and complete training with the University of Missouri Extension.** The same rules were imposed on BASF's dicamba product Engenia in mid-November.

Original story:

Next June, growers in several counties located in Missouri's bootheel region will no longer be allowed to spray Engenia, BASF's dicamba-based pesticide.

The Missouri Department of Agriculture announced Friday that it would ban the pesticide to protect farmers whose crops are vulnerable to damage from dicamba. The herbicide, intended to kill a notorious weed called pigweed, can be difficult to control.

State regulators and growers associations are trying to support farmers who use the herbicide on dicamba-resistant crops while also protecting farmers who don't use dicamba-resistant seeds.

Dicamba becomes a gas in hot weather and can drift for miles and damage sensitive crops. The chemical ruined approximately 325,000 acres of soybeans in Missouri during this year's growing season, according to plant scientists at the University of Missouri-Columbia.

The state could extend the new regulations to other dicamba products, including Monsanto's XtendiMax and DuPont's FeXapan. Some farmers and agriculture experts think that the new label represents a start to addressing damage from dicamba while others, particularly pesticide companies, oppose the cut-off dates.

"It's definitely a tightrope act, making sure we're delivering for our farmers and working side by side with industry and regulatory partners at the same time," said Gary Wheeler, CEO of the Missouri Soybean Association.

"If a producer decides to use [dicamba-resistant seeds], it's his or her choice to use that product," Wheeler added. "And same goes for conventional [growers] to not use that product. So it's our job to make sure that those opportunities exist for both sides."

There is no timeline for when the state could impose similar restrictions on XtendiMax. Monsanto's vice president of global strategy, Scott Partridge, said there's little scientific evidence to support the cut-off dates.

"Pigweeds are going to grow throughout the season and we believe the science supports our growers having the choice throughout the season to use the newest and best technology," Partridge said.

Partridge added that off-target movements of dicamba could be avoided if the University of Missouri Extension provides growers with more training on how to properly use the herbicide.

Several factors, including wind, temperature and the formulation's volatility can play a role in moving dicamba off-target, but [researchers and pesticide companies are debating which factor](#)

[contributes more](#). Dicamba has been used since the 1960s, but has been applied mainly in the spring. Scientists are studying the chemical to understand how it affects crops in summer weather.

MISSOURIAN

MU professor develops cancer treatment using natural sources

Story generated by MU News Bureau release: [New MU School of Medicine Partnership with Indian Company Could Help Produce Holistic Medicine Treatments Aimed at Cancer, Arthritis, Diabetes](#)

By RACHEL McKEE TAYLOR

Kattesh Katti had two main inspirations for developing "green" nanotechnology. The first was his belief that innovation shouldn't come at the cost of the planet. The second was that a medicine could be completely natural.

That's how he came to develop a 100 percent green process that he says uses no toxic chemicals and leaves zero toxic waste. He hopes the developing nanotechnology will be used for treating cancer, cardiovascular disease and arthritis.

Nanoscience is the study of things on the nanometer scale. A nanometer is one billionth of a meter. Nanotechnology is the application of that study.

Katti is a curators distinguished professor of radiology and physics at MU and director of the Institute of Green Nanotechnology. He said that about 15 years ago he began thinking about how he could apply nanoscience to medicine. He figured if he could convert gold metal into disease-specific nanoparticles that were compatible with living tissue, it would open doors to new applications in medicine.

To create gold nanoparticles, gold metal is mixed with another chemical. However, he said that often that chemical was toxic, so after the nanoparticles were created, the toxic chemical would have to be separated before the particles could be used for medical applications.

He remembers his thought process: "There are already chemicals in the human food chain that are very powerful, antioxidants — electron-rich phytochemicals, in soybeans for example."

He also hypothesized that the transformation of metals, gold for example, into nanoparticles involves the interaction of electrons with metals. Antioxidants from various plants are great, nontoxic sources of such electrons, he said.

Antioxidants protect your body from free radicals, which are unstable molecules in your body. [According to the U.S. Department of Health and Human Services](#), there is laboratory evidence that antioxidants may slow the development of cancer. Recent clinic trials have presented a murkier picture.

Free radicals contain unpaired electrons, which are negatively charged subatomic particles. This makes them unstable and capable of causing damage to your body. [Antioxidants neutralize free radicals](#) by providing them with an extra electron to form a pair, or by breaking down the free radical molecule.

“I told (the people who work in my lab) ‘Let’s mix soybean with gold, some precursor of gold,’ and I showed that we produced gold nanoparticles,” he said.

After extracting antioxidants from soybeans, he moved on to tea leaves, and various phytochemicals from fruits, herbs, roots, leaves and flowers that are mentioned in the classic Ayurvedic literature, he said.

His discovery became the foundation for a new field of medicine, “Nano Ayurvedic Medicine.”

[Aryurvedic Medicine](#) is 5,000-year-old medical system started in India, Katti said. It supports the use of herbal compounds, special diets and other uncommon health practices.

Although herbal medicine has been around for thousands of years, Katti thinks it hasn’t reached its potential.

“We don’t rely on herbal medicine; we still go by the English medicine, which is medicine that we buy off the counter,” he said

“What I have shown — I use the herbal technology and then bundle it up through green nanotechnology, and now I’m telling the world this is definitely useful.”

What's next

At the University of Texas MD Anderson Cancer Center, Sunil Krishnan’s research involves treating cancer with gold nanoparticles as well. He said what he has been trying to do is find ways to sensitize tumors to radiation using gold nanoparticles.

Krishnan said Katti has a long-standing interest in Indian traditional medicine, something that is evident from his research.

He said Katti's group had more success translating nano materials "from the bench to the bedside" than most conducting research in the field.

Katti's method of generating gold nanoparticles has the advantages of bio compatibility and safety, he said.

“As his methodology is green and nontoxic, then there’s an added degree of novelty and excitement,” Krishnan said.

The technology has been licensed to Dhanvanthri Nano Ayushadi, a company in India. The company is engaging in human clinical trials.

Katti said the animal testing went well, and he hasn’t seen any red flags. He said he looked for toxicity of the medicine and how effective it is in treating various diseases.

“I am seeing an unprecedented efficacy in treating the diseases,” he said. “Our nano-ayurvedic medicines have shown broad spectrum efficacy on a number of tumor types including breast, prostate, liver, melanoma, lung, pancreatic and glioblastoma. We are working on all these tumors through systematic tweaking of our therapy approaches.”

The medicine will be administered to humans in tablet form, a holistic, noninvasive approach, Katti said.

“It’s as simple as swallowing a tablet with a glass of water,” he said.

Katti said he hopes the technology reaches all corners of the world. He said the current drugs available for treating cancer, AIDS and other diseases are expensive, and only a small percentage of the world’s population can afford them.

“Here is an opportunity that we are telling the world that if you are growing cinnamon, if you are growing soybeans, if you are growing other plants, look, there is a way to create medicines," he said. "There is a way to create pharmaceuticals out of what you grow, through green nanotechnology — a new and sustainable field of holistic medicine.”

Missourinet

Far reaching foster care study announced by Missouri First Lady

By: Jason Taylor

Missouri's First Lady Sheena Greitens announced Monday that the state Children's Division is enrolled in a new study on foster parent recruitment and retention.

The research project is being conducted by the National Council For Adoption (NCFA). Its goal is to find ways to more effectively train and support foster parents.

According to the state Children's Division Annual Report, children in foster care have an average of 3 placements, and more than 500 kids age out of the system per year without a permanent, legal family.

Figures from the National Foster Parent Association show as many as 60 percent of new foster parents quit within their first year.

The research is spearheaded in Missouri by Dr. Elise Dallimore, associate professor of communication studies at Northeastern University in Boston. She says the study, which is also being conducted in Mississippi, is designed to track foster parents from the earliest stages when they express interest in caring for a child.

In a statement, Missouri First Lady Sheena Greitens expressed a need to repair a system that fails to appreciate and retain people who participate in foster parenting.

"We want foster parents to know that they are respected, trusted, and valued as they step up to protect and care for our kids," said Greitens. "And we want to fix things that are driving them away from foster parenting unnecessarily."

13,000 children are in the foster care system in Missouri. The number rose by 3-5% annually between 2009-and-2015. The state Department of Social Services administers foster care through the Children's Division.

Numbers provided by the Children's Division show more than 7,000 kids enter the Missouri system each year. The average age of a foster care child is eight, and the average stay in the system is two years. Kids over the age of 9 are 50% less likely to be adopted than younger children.

Dr. Dallimore, herself a foster care parent, contends a strong system needs to be in place to avoid chronic societal problems. "If we don't support children in foster care now, we will be supporting them as they age out of the system and need to be treated for mental health and substance abuse issues at a disproportionate rate from the population at large," Dallimore said.

Dr. Sheena Greitens is an Assistant Professor of Political Science at the University of Missouri. In her statement announcing the foster care study, she noted the very first dinner she and her husband held at the Governor's mansion was with foster parents and children.