

# Professor mixes science, farming All eyes on Mark Campbell

“Some of the best food I ever ate in the whole world was when I was in Africa.”

BY MICHELLE MARTIN  
Staff Reporter

Mark Campbell, associate professor of agricultural science, said he has been breeding more nutritional varieties of corn to benefit the rest of us. He has developed a type of corn starch that may bring about healthier changes to our processed foods.

Campbell was raised in Hartford, Wis., on a family farm. He said he grew to love working with plants, which led him into the field of agriculture.

“I knew from when I was in high school that I wanted to pursue something in [agriculture], especially in genetics,” he said. “I liked doing plant breeding, that sort of thing.”

Soon after Campbell completed his undergraduate degree at the University of Wisconsin-Madison, he joined the Peace Corps to experience more of the world, he said.

“It’s a lot better than going into a country as a tourist because you get immersed in the culture, and you absorb a lot more that way,” he said.

Campbell said that although he was apprehensive about serving alone in an African country for two years, he found incredible friendliness in his assigned village in Tunisia.

“I was the only American in this small desert community, and the people were just absolutely warm and friendly and giving,” he said. “When I hear people say derogatory things about Middle Eastern countries, I think they’re just getting a

bad impression.”

After Campbell’s time in the Peace Corps, he attended graduate school at Montana State University and earned his doctorate at Iowa State University. In graduate school, he became involved in corn breeding and genetics research.

“I developed a specialty of corn called high amylose corn, and there have been numerous studies that have shown that high amylose corn can serve as a probiotic, that is a substance that helps to boost levels of good beneficial bacteria in your lower digestive system,” he said.

Studies show that high amylose corn starch can reduce the risk of colon cancer because it contains more fermentable fibers, which promote beneficial bacteria, he said.

“It’s probably simulating the diets that we had in early human evolution in which our diets had a lot more fiber,” Campbell said.

Thanks to government mandates in Australia, where diet problems are similar to those in America, high amylose corn starch can now be found in the common McDonald’s hamburger bun, he said.

“You’ll find a lot of processed foods at McDonalds that have been putting this high amylose corn starch into their food,” he said. “Their hamburger buns that they have over there, with white bread, they put some of this high amylose corn syrup into the buns.”

Because both parents work in most American families, people tend to spend less time trying to cook wholesome meals and usually



Krista Goodman/Index  
**Campbell and his son Bobby examine ears of corn in the field where Campbell does most of his research. Campbell developed a special variety of corn that can help boost beneficial digestive bacteria.**

settle for more refined, less nutritious foods, he said.

Therefore, developing more nutritious versions of these refined foods must be a priority, Campbell said.

“[In Tunisia] they would spend all day cooking, and some of the best food I ever ate in the whole world was when I was in Africa,” he said. “It was all homemade stuff. It was food that was grown locally. I ate better there than I ever possibly

did in the United States, ... and they could afford to eat well because they could buy relatively cheap, unprocessed foods.”

Campbell said he currently is experimenting on pigs with Dr. Tom Marshall to discover whether or not high amylose corn starches can reduce certain odor compounds.

In his spare time, Campbell and his wife cultivate a hobby farm at his house.

“We’ve got goats, and we actu-

ally have a couple of pigs, some chickens and ducks,” he said.

Campbell encouraged interested students to take a look at the field of agriculture.

“If someone is undecided about a major and they think agriculture is neat, [or] being outside working with plants and animals is neat, and if they think that science is kind of interesting, then agriculture is a good place for a career for themselves,” he said.

## Indoor air pollutants create health issues

BY STEPHANIE HALL  
Staff Reporter

While the world looks upward for pollution, many ignore the air problems at eye level.

Although some of Truman’s older buildings are starting to show their age, the University’s renovations reflect a growing concern for indoor air pollutants and health issues like asthma and allergies.

Steve Peeler, heating, ventilation and cooling control technician for Truman, said that during the oil and energy crisis in the ’70s people started weather-stripping houses and adding extra insulation. The lack of ventilation and sealing conditions in many homes and buildings caused illness.

“Usually about 15 cubic feet [of air movement] per person is standard according to [American Society of Heating, Refrigeration and Air-Conditioning] a company that set a lot of standards,” Peeler said.

With no ventilation, pollution builds up.

“There are lots of sources of indoor air pollution like building materials, green house gases, cheaper building materials like formaldehyde mobile homes, fumes, solvents [and] paint,” Peeler said.

New University renovations take steps to reduce unnecessary pollutants like using paints that

have lower Volatile Organic Compounds.

“It’s like the new building smell,” Peeler said. “It is actually just fumes being given off.”

The new residence halls provide air conditioning for each room and also a different type of air system. Peeler said the University began installing dedicated air handlers in West Campus Suites, Missouri Hall, BNB and now Dobson Hall. A dedicated air handler takes air from the outside and conditions it separately from return air. In older systems, old air was put back into the new air and reconditioned, Peeler said.

However, with air conditioning comes another type of indoor air pollutant: mold. Darek Fowler, a service manager at Foreman Heating and Cooling, said that after air conditioning season is over there is a tendency for mold to build up.

“Sometimes you’ll find that the evaporator coil air filter will get dirty and it will sit in the drain pane growing algae or mold,” Fowler said.

He suggests people put new air filters into air conditioners to make sure they are functioning properly.

“Most people do not even realize there is a problem till the drain pipe floods inside the unit,” Fowler said.

Steve Peeler said Truman has had problems

“Even if you do see mold it might not be harmful. Some people are more sensitive than others.”

Steve Peeler  
Heating, Ventilation and Cooling Control Technician



Amy Gleaves/Index  
**Dirt has built up around this air conditioning unit in a language tutoring room on the third floor of Baldwin Hall.**

with mold entering campus since the rainy summer season.

“They’ve had some mold over in OP,” Peeler said. “Contractors tore into drywall letting moisture get in the building. Mold spores are everywhere and all it takes is excess moisture to get them to grow. Even if you do see mold it might not be harmful. Some people are more sensitive than others.”

Some of those more sensitive people are those who have allergies and asthma.

Brenda Higgins, director of the Student Health Center, said many students develop allergies and asthma when they come to school.

“People from St. Louis seem to develop allergies and asthma once in Kirksville,” Higgins said. “I have no hypothesis why it is because there is not a major difference in flora.”

Higgins said certain triggers can worsen allergies and asthma like pollutants in the air, pollen, animal

and dust mites and respiratory infections.

“It could be a large population of our students are in rental properties and mobile homes,” Higgins said.

As a whole society, Higgins said Westerners have more airtight homes with an emphasis on cleanliness, leaving little exposure to and immunity to outdoor air pollutants.

Freshman Kathleen Vallance said she has had asthma for about four or five years and allergies since she was born.

“At the beginning of the year I had a really hard time with my allergies to adjust with the difference from home,” Vallance said.

She also said increases in pollen producing plants and mold in bathroom tiles were partially to blame for a rough allergy season.

“I know some of my friends in West Campus and Ryle have had allergy problems because of mold,” Vallance said.

## STUDIO | Art students use abandoned University house to work on capstone exhibits and various other projects throughout the semester

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students share a single large studio, but space is limited.

“For us, our needs are very basic,” he said. “We need space for advanced students to be able to produce artwork for their advanced classes and capstone exhibitions.”

Some of his students paint in off-campus apartments or private residence hall rooms on campus, Bohac

said. Standing in the OP studio, he points toward a large canvas propped up near the opposite end of the room.

“The painting on the back wall was done in the Studio House,” he said. “I’m not sure that if I had three or four people [each] painting that large I could handle them in the [OP] studio.”

The Studio House is subject to the same University rules that apply to

the OP painting studio and all campus facilities, he said.

Studio art major junior Allison Sissom acts as the Studio House manager, making sure students follow University regulations and acting as liaison between Bohac and the students using the house, she said.

She said she spends as many as 15 hours per week at the Studio House.

“The closer it gets to a due date for

a painting, the more I’m here, obviously,” she said. “Most of the time I’m here for three-hour chunks every day.”

She works from the garage, a large but drafty space. Once the weather cools down, Sissom plans to stuff insulation under the garage door and plug in a space heater, she said.

Upon the wooden plank-lined garage walls hang several paintings of

varying sizes, multi-layered works integrating textiles and images from fashion magazines and Disney animated movies.

“Making yourself go somewhere to work, it helps you concentrate,” Sissom said. “We don’t have Internet access here, we don’t have telephones, ... [and] it’s not like your friends stop by and stuff like that, so it’s really isolated and it helps you focus.”

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