

OSU Students Create a Food Product That Is Out of This World

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STILLWATER, Okla. – The Food Science Club at Oklahoma State University won first place in the 2005 NASA Food Technology Commercial Space Center Product Development Competition.

The team, which included team leader Dharmendra Bangalore, Yee Shyen, Sunita Mcwana, Fadi Al-Jorf, Shamira Fernandes and Dimple Kumar Kundiya, developed the winning entry, Nutraffin, under the direction of their adviser and OSU food science assistant professor, Margaret Hinds.

Nutraffin is a bite-sized carrot muffin snack made from fresh carrots, peanut flour, wheat flour, sugar, low-sodium baking powder, cinnamon, cardamom and soymilk.

“I am very happy that we won this competition, and would like to commend the team as well as our team leader,” said Shyen, food product development graduate student. “This activity has given me the opportunity to learn a lot about the food product development process.”

With the collaboration of Hinds of the Nutritional Sciences Department and the Food & Agricultural Products Center on the OSU campus, the students had the resources needed to create the award-winning product.

“We have an inter-college food science program at OSU,” Hinds said. “I feel these accomplishments will reflect positively on the strength of the program.”

The objective of the competition was for the students to make a nutritional, beneficial food with only crops that can grow in space.

The project started as a brainstorming session with the team discussing various ideas. They decided that they would compete using the carrot-based muffins and set out to fine-tune the recipe.

Once the product was completed, the team conducted a sensory panel at the FAPC. Using the feedback received from the sensory panel, the team discovered the recipe needed some changes.

“We made the needed changes, and the final batch was perfect,” said Mcwana, food science doctoral student.

Deciding on the right name for the product was a challenge for the team. The name, Nutraffin, was created to convey the nutritional value of the muffin.

Nutraffin is high in fiber and protein and is a blend of necessary vitamins and essential minerals. Additionally, it is high in calories to provide a boost of energy in a single serving and is low in sodium and iron.

The students put in many hours working on the project as a team.

“The challenge was the schools that usually win these national-level, product-development competitions have been winning them for the past five to 10 years,” said Bangalore, team leader and food science doctoral student. “So, it was really rewarding for us to break the trend.”

This is not the Food Science Club's first time to compete in the NASA competition. Last year, the team received a "Certificate of Excellence" for outstanding performance in the competition with the product "Veggie-to-Snack," *a handy, spicy space meal*.

“Having participated last year, we had a better idea of what the judges were looking for in the concept of the product,” said Kumar Kundiya, food and bioprocessing graduate student. “That prepared us for this year’s entry.”

Fernandes, food science graduate student, said being a part of the product development team was a very exciting experience.

"I believe all the team members were very enthusiastic, and I credit the guidance of our adviser with the success of the product," Fernandes said.

Al-Jorf, food science doctoral student, also agreed that working well as a team contributed to the group's success.

“I think the main reason our team received this honor is that we were willing to help each other and open for new ideas for suggestion,” Al-Jorf said. “We modified things many times, and everyone was willing to help accomplish the goal.”

Nurhan Dunford, FAPC Oil/Oilseed Chemist and last year's Food Science Club adviser, said she is very impressed and pleased to see the Food Science team win such a prestigious competition this year.

“With this experience I am sure they will continue to be successful in future competitions," Dunford said. "We are proud of our team.”

The team earned a trip to the Institute of Food Technologists 2005 Annual Meeting and Food Expo in New Orleans, La. in July, where they will showcase their new product at the NASA booth. The team will also present their product and research to NASA scientists and officials at the Johnson Space Center in Houston, Texas in August.

“I believe this will open doors for them as young scientists and should help to boost their morale and give them confidence,” Hinds said. “By achieving this honor, the students are bringing with them not only hands-on experience but also scientific skills, creative thinking ability, as well as the ability to work on a team. All of these things are important.”

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