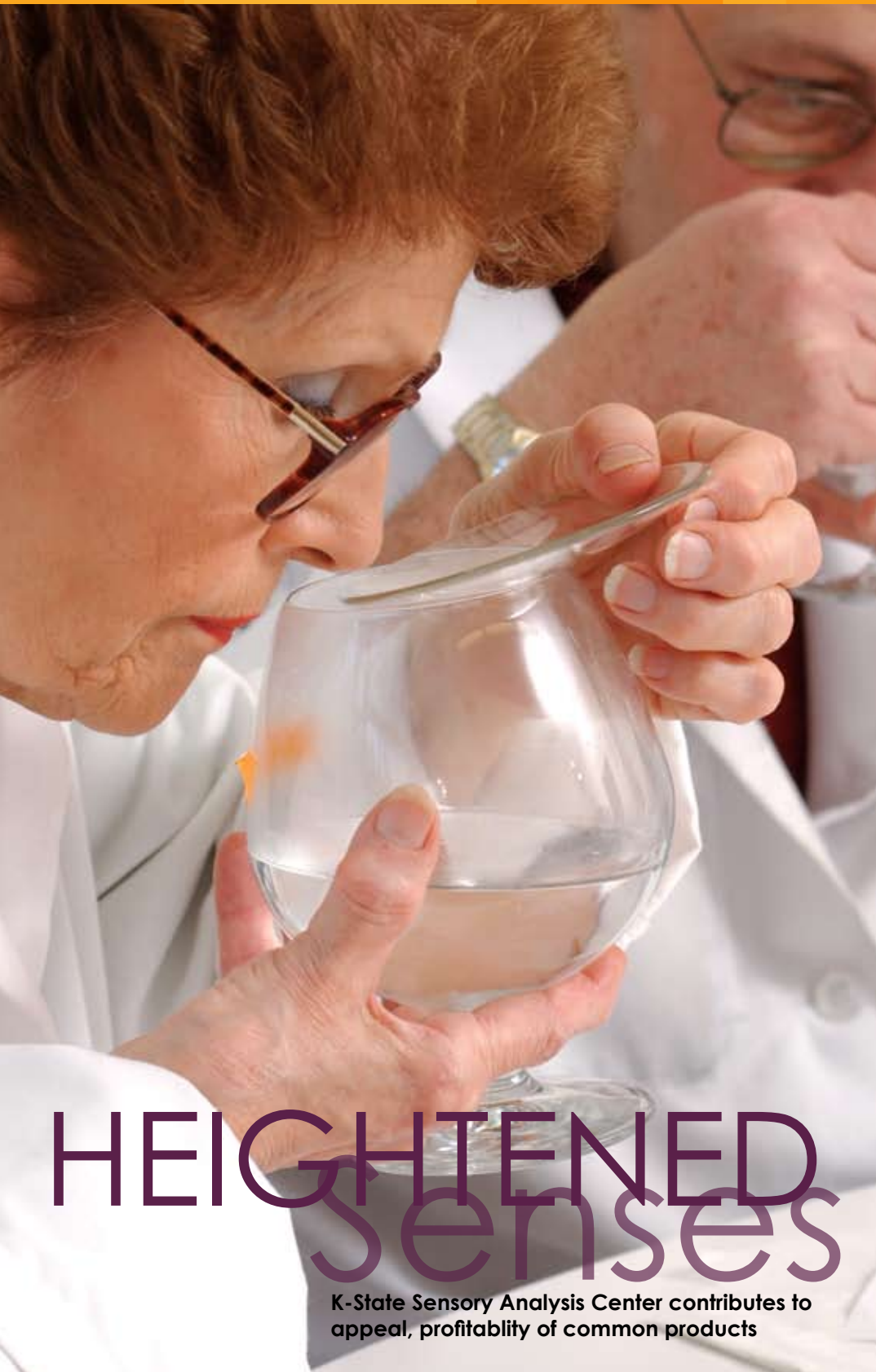


HN

DEPARTMENT OF HUMAN NUTRITION

2007 NEWSLETTER



HEIGHTENED senses

K-State Sensory Analysis Center contributes to appeal, profitability of common products

Five senses. We've all got them. Most of us can use them well enough for everyday purposes. But suppose you had to describe a cola drink. Could you pinpoint the region of the world where the nutmeg that flavored it was grown? (Did you even know colas have nutmeg in them?) If you work at the K-State Sensory Analysis Center, in the Department of Human Nutrition, you knew that, and a lot more. The Center is a world-famous sensory testing facility, unique in its size, staffing and level of expertise.

“Essentially, anything that can be perceived by the five senses is appropriate for testing at our facility,” said Edgar Chambers IV, professor of human nutrition and director of the Center. “We do testing where we may pick apart the attributes of a product and advise a client how to achieve the product they want to create.”

“We also contract with governmental agencies. Right now we're working with the USDA and the Centers for Disease Control on better tools to help people remember and estimate how much they ate. This will help us get more accurate data on portion sizes and good nutrition.”

The Center was established in 1983, the brainchild of Human Nutrition professor Jean Caul, K-State's first female distinguished professor. Caul

• Continued on page 7

Greetings!



Dr. Denis Medeiros
Department Head,
Human Nutrition

The American public is growing older and more obese, and less physically active. I can't think of a time when human nutrition is more important in helping to deal with the health issues that arise from these new realities. Whether we are discussing molecular biology of nutrient function, biochemistry of how nutrients are used, food selection and behavior, clinical nutrition, nutrition education, sports fitness and athletic training, or public health, we see ourselves as part of the solution.

Our students are change advocates, practitioners, policymakers, and researchers. Many of our graduates have become registered dietitians, physicians, dentists, pharmacists, physical therapists, commodity board spokespersons, and faculty members at major universities. Today we are at an all-time record high in enrollment with more than 300 undergraduate students and almost 40 graduate students. We have faculty in the Department of Kinesiology partnering with us on the combined dual degree in Nutrition and Exercise Sciences and in the Athletic Training Education Program. Some of their faculty members are training Ph.D. students in nutrition and physical activity. Our sensory analysis program is a one-of-a-kind graduate training program with enthusiastic industry involvement.

All of this shows that we are multidisciplinary in our approach, allowing us to be nimble so we can change with the times and as society demands. Our ability to continue to excel always hinges on available resources including tools like fellowships to recruit the most talented students, and good facilities in which to conduct research that impacts all our lives.

I hope that you enjoy the new look of this newsletter. Many of you have had written communications from me in the past. This time we thought we would celebrate our achievements with our alumni with a little more style. I hope you enjoy what you find inside.

Alumna Uses National Podium to Address National Need

When asked about her career path, Dr. Elizabeth Pivonka chuckled, "It's all just by chance, actually."

Pivonka — '84 B.S., '85 M.S. and '88 Ph.D. foods and nutrition — is the president and CEO of the Produce for Better Health Foundation (PBH) in Wilmington, Del. A non profit organization, PBH is dedicated to improving public health by encouraging people to eat more fruits and vegetables, and by providing education about the health benefits of produce.

Since 1991, Pivonka and PBH have run a national campaign called "5 A Day," encouraging Americans to add more fruits and vegetables to their diets. And in March 2007, PBH officially launched its new campaign, "Fruits & Veggies—More Matters," which replaces 5 A Day.

So just how did Pivonka, a native of Topeka, Kan., end up in Delaware, overseeing a foundation that promotes produce across the country?



A few key choices seemed to put her in the right place at the right time, beginning with her undergraduate career at K-State.

"I was interested in nutrition, and I knew they had a good program there," Pivonka said. "I actually looked at quite a number of colleges nationwide, but as it turns out, K-State gave me a scholarship and that was the deciding factor."

The decision proved to be a big one, with Pivonka earning three degrees from the University, and meeting her future husband Don at K-State as well. She says

her education at K-State equipped her with the fundamental knowledge she uses in her profession today.

“It gave me the solid science background that I needed, which was very important,” Pivonka explained. Following graduation, she worked for two years as an assistant professor in the Nutrition and Dietetics Department at the University of Delaware, filling in for professors who were on sabbatical or leave.

Pivonka then did six months of post-doctoral work before landing a job at the Produce Marketing Association, a trade group for the fruit and vegetable industry. Despite her claims that her career was a product of chance, promoting the health benefits of produce came naturally to Pivonka. Some of her ideas stemmed from her college days.

“I remember when I was in college I used to think the dairy and the pork industry campaigns were very interesting. I couldn’t figure out why the fruit and vegetable industry didn’t do something like that, because produce is so important,” Pivonka said.

“In fact, that was one of the questions I asked when I started at the Produce Marketing Association: ‘Why doesn’t this industry do what the dairy and the pork industries do?’” she continued. It therefore wasn’t surprising that Pivonka helped launch the Produce for Better Health Foundation in 1991.

The national 5 A Day campaign actually grew from the existing 5 A Day campaign in California, launched by the Department of Health in 1988 with a grant from the National Cancer Institute (NCI).

“That was the first time that fruits and vegetables were ever promoted as a total category. Their funding was running out at the Department of Health. The industry liked it, and NCI liked the program,” Pivonka recalled. “That’s

when the Produce for Better Health Foundation was incorporated so that we could take that program national with the help of the government and the industry.”

Though the initial campaign focused on increased consumption of fruits and vegetables for cancer prevention, the idea eventually grew.

“Over the years, 5 A Day has evolved into more than a cancer message. We, as dietitians, know that people who consume generous amounts of fruits and vegetables as part of a healthful diet are likely to have reduced risk of chronic



Pivonka with California Secretary of Agriculture A.G. Kawamura



With USDA Secretary Mike Johanns



With daughter Jessica

diseases, including stroke and perhaps other cardiovascular diseases, type 2 diabetes and certain types of cancer. Also, as part of a healthy diet, eating fruits and vegetables may make it easier to control your weight,” Pivonka noted. “And, at PBH, we monitor the literature about the role that fruits and vegetables play in the prevention of many other diseases, like those related to bone and eye health.”

A major force in the national 5 A Day efforts since the beginning, Pivonka even co-authored “5 A Day: The Better Health Cookbook” with Barbara Berry, published in 2001. In 1997, she became president and CEO of PBH. But with the release of the 2005

federal government’s dietary guidelines, PBH and its national partners decided to reevaluate the 5 A Day program. The guidelines changed to recommend anywhere from 4 to 13 servings of fruits and vegetables daily, depending on age, gender and physical activity.

The result of a PBH-led rebranding effort is the new “Fruits & Veggies—More Matters” campaign, which officially launched in March. The campaign aims to encourage all Americans, regardless of age, gender or other attributes, to eat more fruits and vegetables.

“We wanted to have a rallying cry that was motivating to a large portion of the population,” Pivonka enthused.

In spite of her busy schedule, when the College of Human Ecology honored her as a 2005 Alumni Fellow, Pivonka

made time to return to her old stomping grounds, speaking to classes and getting reacquainted with K-State, which she remembers fondly.

“K-State reminds me of everything that I like about Kansas, which is still home to me, despite having lived in Delaware for 20 years. I love the native limestone buildings, meadowlarks, red squirrels, the way the prairie grasses change colors in the fall, thunder, and the big, blue sky. And I have fond memories of my regular cycling route, on flat, wide roads with very little traffic and only having to share the lane at the pool with one other person!”

Pivonka also has hopes of moving back to the Flint Hills one day.

“I’m trying to convince my husband to retire in Manhattan at some point in time, but he likes the ocean too much,” Pivonka said, adding, “And I’m trying to persuade the kids that K-State might be a good place for them to go to school.”

KSU WILDCATS



Athletic Training graduate assistant Lock Schelle in
Via Christi hydrotherapy room, in Vanier Football Complex

Shawna Jordan — assistant professor and director of the athletic training education program in the Department of Human Nutrition — knows that her program is something special. It boasts practicum and hands-on experiences, opportunities in professional settings, and a manageable program size that allows constant contact between faculty and students.

Launched in the fall of 2003, the program offers a bachelor of science in athletic training, and attracted 21 students in its first semester, according to an October 2003 press release. At present, the number of students hovers around 100. The steady increase has finally leveled off. Jordan thinks that's a good thing.

“We really are at the point right now where we feel we're in an ideal situation for us. We like to be able to give our students a lot of tailored, individual attention. We have that connection with them where we know their ups and downs and what their goals are.”

Prior to the establishment of the degree program in HN, interested students had to major in something else, typically kinesiology, with an emphasis in athletic training. That's the route Jordan — ATC (certified athletic trainer) and LAT (licensed athletic trainer) — took into athletic training.

Originally from Beloit, Kan., Jordan grew up in a family of K-Staters, so it wasn't too surprising when she chose K-State for her undergraduate education. Jordan went on to earn her M.S. in education with an emphasis in sports psychology from the University of

TRAINING for the Future

Athletic Training Program gives students
intensive preparation for exciting careers

Kansas and her Ph.D. in curriculum and instruction from K-State.

Jordan was the recipient of K-State's 2006 Presidential Award for Excellence in Undergraduate Advising, and she loves getting to know her students and helping them succeed.

She has advised most of the program's students since becoming program director in January 2002, after stints at K-State as assistant athletic trainer, then director of clinical education for athletic training. She also helped launch the bachelor's program, one of the first of its kind in the Big XII.

Recognized by the American Medical Association as allied health professionals, athletic trainers must be certified to practice. Jordan is emphatic about preparing students for certification, and for life on the job. "As we tell students when they come meet us, 'This is the one degree that from day one, you're going to have the opportunity to be doing things and being in situations that you will have in your real job,'" Jordan said.

Heather Duitsman, '04 B.S. athletic training and B.S. kinesiology, an assistant athletic trainer at Eastern Illinois University, echoes Jordan's sentiments.

"The program has a very good and complementary relationship between academics and clinical experiences," Duitsman explained. "It gives you a taste of what the work force is like and experiences that are true to the profession."

In addition to six semesters of clinical experience with K-State Athletics, Manhattan High School sports, and medical rotations through campus or local private practices, students are also encouraged to pursue internships. Possible post-graduation careers span high school, junior college and university settings, professional athletics, corporate wellness centers, and research and education. And in a field once dominated by men, the numbers are now more balanced between men and women. Jordan feels that diversity enriches the educational experience.

"We have students that are from really small high schools, students from really large high schools, public and private, and from all types of ethnicities. So I think it is a definite plus for our

program. It allows students to really get to know other cultures."

Also adding richness to the program: internship opportunities provided by alumni. According to Jordan, these experiences are a key component of adequately preparing students to be successful in the profession.

"It allows students to hear the ups and downs of the work, to learn from alumni experiences," Jordan enthused. "As with any profession, you have the next generation coming in, and internships are our opportunity as practicing athletic trainers to really influence them. It's crucial for us."



Kelly Thomason, instructor, with a Rehabilitation of Athletic Injuries class

Duane Saunders, '61 B.S. physical education and '81 M.S. adult education, Minneapolis, Minn., is one of the alumni committed to helping the next generation. Having earned his certificate degree in physical therapy in 1963 from the Mayo Clinic, he has worked in both physical therapy and athletic training, and now owns The Saunders Group, which makes physical therapy and sports medicine equipment. Saunders has donated much-needed equipment to K-State's program, and also visits the University regularly, giving talks to student athletic trainers, as well as kinesiology and ROTC students. The Saunders Sports Medicine Center within the Vanier Football Complex is named in honor of his contributions.

To Saunders, it makes perfect sense to invest both time and money in the program.

"As you get older and can afford to support things, you like to support programs that are successful. The athletic training program certainly falls into that category," Saunders remarked.

The resources that are currently in demand for the program include scholarship opportunities, as well as facility and equipment needs.

When asked how the athletic training bachelor's program ended up in the College of Human Ecology, an amused Jordan explained that it makes total sense to her.

"It goes back to the Human Ecology motto: 'In a world focused on things, we focus first on people.' That's what we do,"



Shawna Jordan

Jordan said. "We're very much caregivers, putting people first, so I laugh because that's a question I get all the time, but to me, it's so obvious."

Shawna Jordan would love to hear from alumni and friends of the program! Please contact her at jordan@ksu.edu. If you'd like to discuss opportunities for investing in the athletic training education program, please contact Jennifer Rettele-Thomas, director of development for the College of Human Ecology, at jenniferr@found.ksu.edu or 1-800-432-1578.

Long-time Professor Leads In-demand Program

Nutrition and Exercise Science meets need for combo option

She grew up in Green Bay Packer country, right across a Wisconsin cornfield from her future husband. But Kathy Grunewald, professor of human nutrition and director of the nutrition and exercise sciences program, has been a K-Stater for a long time now. She pioneered the extremely popular nutrition and exercise sciences program, and her students have helped to address modern-day health and fitness concerns ever since.

The nutrition and exercise sciences program is a joint effort of the Department of Human Nutrition and the Department of Kinesiology, in the College of Arts and Sciences. Students earn a B.S. in both human nutrition and kinesiology, and students who are drawn to the program almost instinctively understand the relationship between nutrition and exercise.

“I hear that again and again, that they can’t imagine one without the other. They believe they have to have both, and of course, I agree,” Grunewald said.

Originally interested in physical education, Grunewald became more and more fascinated with nutrition during college, eventually earning her bachelor’s degree in nutritional sciences from the University of Wisconsin. She earned her master’s and Ph.D. degrees from the University of Kentucky, where she followed her husband Orlen as he earned his Ph.D. in agricultural economics. (Orlen is a professor in the K-State Department of Agricultural Economics.) In 1979, they checked out Manhattan as a possible place to lay down professional roots.

“K-State was looking for an assistant professor to teach a big nutrition class and that’s what I really wanted to do,” Grunewald said. “When I interviewed for the job, I saw Justin 109 and just thought it would be great to teach in that big lecture hall. Also, the week I interviewed, Kansas happened to be having really

good weather! This seemed like a good move.”

Grunewald’s research and teaching interests revolve around nutrition and exercise and how they interface, both in terms of physical performance (as in sports) and in terms of health and wellness. In fact, the highly popular nutrition and exercise sciences program evolved from student interest in these same interactions.

“It’s wonderful when people stop by, send an email or just give us a call. We really do care what happens to our graduates!”

— Kathy Grunewald

“In the early 1980’s, I taught a course on nutrition and exercise, along with a faculty member from kinesiology. Students began asking me if it was possible to get a degree in both areas, and I eventually got tired of saying I didn’t know how you’d do that!” Grunewald recalled with a laugh.

“So I sat down with faculty in kinesiology and we put together a curriculum and the whole process was really very simple. We were eventually approved in 1985, and within a short time, we were the fastest-growing undergrad program in Human Nutrition.”



Kathy Grunewald


Today the nutrition and exercise sciences program has between 110 and 130 students per semester. About one-third of those students will go on to careers in fitness facilities such as gyms, hospitals, or corporate wellness programs, usually in larger cities where the jobs are. Another third gravitate to nutrition positions in a variety of settings, with about half of these students pursuing the registered dietitian credential. And another third continue their education in prestigious programs all over the country, eventually becoming nurses, physical therapists, physicians or physician’s assistants.

Though they may pursue different career tracks, Grunewald’s students do share some common characteristics.

“Our students tend to be very health and fitness conscious, both for themselves and in helping other people become physically fit,” Grunewald said. “One thing I’ve noticed for 20-plus years is that they tend to do sports and activities that are more individual, such as bodybuilding, track and dance. They’re not into team sports as much but rather into individual expressions of physical fitness.”

Nutrition and exercise sciences is an intensive five-year program, requiring

• Continued on back page



Joyce Buchholz and
Melinda Otto sample cereals

Heightened Senses

• Continued from cover

came to K-State in 1967 after a 25-year career in the food industry, with the goal of establishing a sensory analysis facility, a hope she instilled in her graduate student, Edgar Chambers IV.

Nothing came of her plans until 1982, when Chambers, working in private industry, contacted Caul for help with a sensory project. The company's financial backing helped her establish the Center, and after Caul's retirement, Chambers returned to K-State and the Department of Human Nutrition, assuming leadership of the Center in 1988.

In 2006, the Center carried out 112 projects for about 35 different clients. Projects can last anywhere from two weeks to over a year. Recent projects include:

- The testing of infant formula for babies with digestive diseases;
- The ability of a razor to give a nice, clean shave—to either a man's face or a woman's legs;
- The replacement of trans fats in prepared foods with other ingredients, but without negatively affecting the taste, texture or cost of the food; and
- The readability of package directions—if you follow those directions exactly, will you really end up with a great batch of brownies?

The Center is essentially self-supporting, generating most of its half-million dollar annual budget with industry fees or government contracts. However, the Center also relies heavily on private support. Industry and government contract fees go directly to the state, and those funds are not available for student and faculty travel, student scholarships, guest speakers, workshops and other crucial factors that impact student recruiting and retention.

“Most of the funding we receive from donors goes right to student support,

whether that's to fund a graduate student's fellowship or bring important experts in private industry here as guest lecturers,” Chambers said.

The core of the Center's function is its panel of sensory analysis specialists, a group of highly trained professionals with better-than-average descriptive abilities.

“We look for normal ability to taste and smell,” Chambers explained. “We're not testing products that super-sensitive people will use, so we're just looking for regular people. But the ability to describe things is very important. Most people will describe something by saying it ‘smells nice.’ But I want to hire the person who says, ‘Oh, that tomato soup really smells more like spaghetti sauce. It must have oregano in it.’”

Successful new panelists then go through four to six months of intensive training of increasing difficulty to hone their ability to discern and describe attributes of food products, beginning with applesauce.

“We give them four samples,” Chambers said. “One is standard applesauce, one has extra sugar, one has extra cinnamon, and another has some sour flavor added. These are usually fairly easy for people to describe. But then things get harder. If we increase the sweetness, what happens to the overall flavor? Does the applesauce taste more like fresh or cooked apples? Eventually our panelists can describe, in great detail, the flavor of a poundcake or a cola, where the flavors are very blended and subtle.”

The Center also conducts large-scale consumer research to test the acceptability of products, depending on the client's needs, location and target market. Although the Center maintains a database of 4,000 consumer testers in the Manhattan area, the staff will go anywhere to get reliable consumer data.

“For instance, if the product is designed for consumers of Asian descent who live in the United States, we'll probably set up testing on the West Coast. But if the product is designed for Asian consumers in Thailand, then we go to Thailand, at the client's expense, of course,” Chambers said with a smile.

Chambers knows the Center could contribute even more to product quality if it had enhanced facilities and space for more staff.

“One of our goals in the renovation of Justin Hall is to be in a new building that will house our research and teaching facilities, facilities specifically designed for what we do, unlike where we work now. This would also free up more space in Justin Hall for other programs. We need more rooms that are temperature and humidity controlled. We need individual interview rooms for talking to subjects about their perceptions of a product. And we don't have any facilities now that work well for testing fragranced products.”

So the next time you enjoy the feel of a paper towel, the scent of a candle or the crunch of a chip, remember that the experts at the K-State Sensory Analysis Center may have had a hand—or a nose—in its appeal.

If you would like to contact Edgar Chambers IV about the Sensory Analysis Center and its work, please contact him at (785) 532-0166 at eciv@humeec.ksu.edu. If you're interested in investing in the students and work of the Center, please contact Jennifer Rettele-Thomas, director of development for the College of Human Ecology, at 1-800-432-1578 or jenniferr@found.ksu.edu.



Paulette Wilson
tests the appeal
of a toothpaste

Long-time Professor

• Continued from page 6

from 148 to 154 credit hours. There are now no scholarships specifically for these students, who rely on Human Ecology, department and university scholarships for financial support; some are also on athletic scholarships.

“We’d definitely like more scholarship support for our students. These are ambitious students, willing to go an extra year and get that second degree.”

Of course, Grunewald wouldn’t mind knowing about internships or professional

opportunities for her students either. She’d like alumni to keep the Department in mind when they have openings in their companies.

“Let us know when you have jobs, because we always want to tell our students about jobs they can apply for and we keep them informed about those opportunities. We try to help them in any way we can.”

Grunewald has taught over 6,000 students in her years at K-State, and she’d

be thrilled to be contacted by each and every one of them.

“Just touch base once in a while and let us know what you’re doing. It’s wonderful when people stop by, send an email or just give us a call. We really do care what happens to our graduates!”

Keep in touch with Kathy Grunewald by emailing her at grunenw@ksu.edu.

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