As the “buy local” movement has gained popularity in the past decade, the concept of Urban Agriculture, is hardly new to civilization let alone Maryland, and in fact can be traced to Ancient Egyptian times and in this country had its first brush with Victory Gardens during World War II. Today’s trends in consumers wanting to know where their food comes from provides a natural intersection of our more traditional rural larger scale production operations with those in urban areas where social, economic, esthetic and environmental benefits are realized.

Like so many things, backyard poultry and home food preservation are back in the spotlight for local homeowners. Our University of Maryland Extension faculty has been on top of things offering educational programs featuring sound management and food safety protocols for our clients.

One of the first things I learned when I arrived as dean ten years ago was the huge volume of Maryland consumers that were taking advantage of programs and services offered by the Home and Garden Information Center (HGIC). Like many things, with the advancement of technology, HGIC has improved and expanded the ways they communicate with homeoweners. I think you’ll enjoy learning more about those positive changes in this issue.

Some other projects and topics that have been on going, but have received renewed attention are urban gardening opportunities in Baltimore City to increase local food supply, and also re-claim unused lots making them beautiful and beneficial at the same time.

It is also with great pride that I share so many accomplishments of our outstanding faculty. The imagination and initiative demonstrated through successful funding of projects is always inspiring to me and other colleagues to continue to dream bigger in meeting the needs of our students and the citizens of Maryland. I am also very proud to read of the many accomplishments of our students and alumni.

As always, I’ve enjoyed visiting with many of you at different events and am greatly appreciative of the partnerships that we enjoy with so many off campus partners. Our spring alumni reunion and awards program and our signature Maryland Day-Ag Day breakfast allow me to visit with you and your families in a more personal way. I appreciate your ideas and enthusiasm as together, we continue to make the College of Agriculture and Natural Resources the best!
A tree might grow in Brooklyn, but a farming community is springing up in Baltimore. University of Maryland Extension is providing the technical expertise to build a thriving urban agricultural community.

“Anyone can grow, but other things need to happen in order to grow quality produce,” said Manami J. Brown, city Extension director.

And with that thriving community, urban agriculture is not only helping to feed city residents but it also promotes healthy living and improves the environment.

The city “farms” with the help of Extension’s use of “high tunnels” or “hoop houses” — cloth or film-covered greenhouses with curved roofs that can be easily moved from place to place.

The high tunnels can measure 20 feet wide and as much as 148 feet long. With more than 3,000 square feet of growing area, a high tunnel can hold 10,000 plants, said Naima S. Jenkins-El, master gardener coordinator for the Baltimore City Extension.

Inside the high tunnel, the temperature is 15 to 20 degrees warmer than the temperature outside, especially when the sun is shining, she said.

In summer, the high tunnels are the perfect hothouse. As fall turns to winter, the high tunnels trap solar energy, which allows urban farmers to extend the growing period for vegetables like carrots, kale and salad mixes.

“It kind of gives you an edge on your growing season,” she said.

Forty to 50 hoop houses are scattered across the city, including at three high schools – Lake Clifton, Patterson and Green Street Academy – which provide learning experiences for the students. That learning experience could turn into employment — the city’s September 2013 report “Homegrown Baltimore” called urban agriculture a job creator — which was the case of Jenkins-El.

“It took 37 years for me to realize I like playing in the dirt,” Jenkins-El joked.

The farming outreach also exposes residents to fresh food, showing them where produce comes from. They can compare what they see coming out of the ground with what they see at a supermarket.

“People who have never seen food come out of the ground are amazed that this is the science of growing things,” Jenkins-El said.

All the food grown is used. Most of it is donated to help to overcome Baltimore’s food deserts, which are low-income areas where supermarkets are distant and automobiles are few. In 2012, the Baltimore City Department of Planning estimated 125,000 city residents, or about 20 percent of the city’s population, lived in a food desert.

The department estimated 25 percent of the city’s school-aged children live in a food desert.

If the food can’t be donated, it’s put into a compost pile to help enrich the city soil.

For growers, the Extension personnel also provide technical expertise, like nutrient management, to help boost yields, Brown said. The service also helps to connect growers so they can work collaboratively and provide training so they can think entrepreneurially, she said.

In addition to alleviating the lack of availability of fresh produce in some neighborhoods, urban agriculture offers other benefits to Baltimore City. It improves the environment and can make the city more sustainable by reducing the amount of food that must be trucked in to reach consumers.

Through the master gardener program, Extension has expanded its reach in the city. Master gardeners have taught agriculture literacy programs to 4,500 people at a number of city events, according to the city’s 2013 annual report.

Fourteen soil improvement workshops taught 140 gardeners and urban
farmers. Ninety people attended 12 “greening university” sessions, which detailed the best practices for gardening and managing open space.

And 25 master gardener interns became certified Extension master gardeners, according to the report. The master gardener committee conducted workshops and helped establish gardens at 17 city schools. The volunteer hours add up. The report says master gardener volunteers racked up 5,266 hours valued at nearly $134,000.

Jenkins-El said it would be hard to estimate how much food is generated by the gardens because there are so many different tracks. Some food goes to communities, or to food kitchens, or to the people who helped out with the garden, she said.

According to the 2014 report, the master gardeners donated 465 pounds of produce to Govans Ecumenical Development Corporation CARES Food Pantry on York Road in Baltimore.

Rachael Neill, the CARES program director at Govans, said she believed that figure reached 500 pounds in 2014.

“The produce is a great thing for us to be able to offer. It gives people the chance to make healthy meals, even though they’re on tight budgets,” Neill said.

Braxton Griffith was only three years old when a family acquaintance gave him a hen and a rooster. Braxton has always been fascinated with birds, whether it was seeing them on the pages of his storybooks or actually watching them swoop through the air. While chickens are not exactly as graceful as some of their feathered colleagues, there’s still something appealing about them, said the 15-year-old who now has his own business shipping chicks and fertilized eggs across the country to an ever-expanding group of backyard chicken growers.
"For sure it’s growing," said the Boonsboro teen. "It’s skyrocketing."

No exact figures exist for the number of folks in Maryland with bragging rights to having the freshest eggs in the neighborhood, said Jeff Semler, agriculture educator for Washington County Extension. "Nobody keeps track. They don’t fill out an ag census. The commercial farmers are the only ones tracked," but if you look anecdotally at the backyard growers, there’s clearly a trend, he said.

"I’m not sure I could point a finger to a particular date when it started gaining momentum," Semler said. "Actually, I think it’s more a resurgence. One hundred twenty years ago even in the city there were people who probably had a pig and some chickens. The pig was their garbage disposal and the chickens provided fresh eggs and something for the stew pot. "Maybe it came about with the hippie movement and going back to the land while listening to the Grateful Dead," he quipped, but likely a major influence was the mid 1990’s emergence of the local food movement.

Dale Johnson, farm management specialist in the College of Agriculture and Natural Resources, suggested the increased interest came about because "anytime you have a recession there’s an uptick in gardening and I think that backyard poultry is an extension of the gardening movement. Chickens go very well with gardens," he said, but cautioned that people shouldn’t look at raising a couple of chickens as a good way to cut the family food budget. Johnson said the productive life of a laying hen is two to three years, which involves buying a lot of feed, even if you supplement it with table and garden scraps. And a chicken house for four or six hens "could cost $200 to build."

Semler agreed. "People need to get over the quaint notion that raising hens will get you eggs that are cheaper than what you can buy. Those farms buy feed by the railroad car; you’re doing it by the bag. But that’s not a reason not to have chickens. You just have to think of it as a hobby" and if you get an over abundance of eggs "a good suggestion is to build goodwill with the neighbors and give them a dozen from time to time."

Johnson added that you "shouldn’t try and hide them from the neighbors. Hens cackle when they lay an egg, although it’s not as annoying as a rooster. And it’s also a good idea to keep the birds confined so they’re not flying into neighbors’ yards."

Johnson and Semler have other considerations on their list that newbie urban farmers should keep in mind. "First off is that while chickens can be trained to a certain extent, they basically go where they want to go," said Semler. "And when it comes to rounding them up, they make an NHL running back look like an amateur. Another thought to consider is that chickens need care every day. You can’t go to the Bahamas for a week without a chicken sitter." Johnson said backyard growers "need to have an end game. What happens after a chicken stops laying eggs? Do they become a pet?"

Too Many Eggs
Over production sometimes can be as bad as underperforming hens. "Some people will get more chickens than they need," Semler said. "A chicken lays an egg a day, so if you have a dozen in your flock, that’s a dozen eggs a day and you maybe only eat eggs on the weekend because during the week you’re rushing off to work and you just grab a doughnut. I like eggs, but I can’t eat 21 in a week. A family of four can get by with three hens." Johnson said he and his father have 22 chickens between them, more than enough to keep the extended family in eggs.

"I was driving in Hagerstown and remember seeing a red tail hawk take a pigeon out of the air," Semler said. "You can mitigate this problem as long as you give up the romantic notion of free-range. Free range is OK as long as you’re willing to realize that nature takes its course," there’s a food chain in play "and nature never takes a day off."

He suggested making a fenced-in chicken run that’s long and skinny, like a bowling alley. "Hawks won’t go in a space that’s narrow; they don’t feel safe. You have to put a challenge to them killing off your flock. He also mentioned that, “bald eagles are making a comeback and they like chicken, too. Everybody likes chicken." He added that growers should be on the lookout for the black rat snake that’s fond of stealing eggs from a nest. A snake might chase a mouse into the chicken house and then see the eggs as an easy target.

Perhaps a chicken’s biggest predator is birds of prey, hawks and falcons that appear even in urban settings. "I was driving in Hagerstown and remember seeing a red tail hawk take a pigeon out of the air," Semler said. "You can mitigate this problem as long as you give up the romantic notion of free-range. Free range is OK as long as you’re willing to realize that nature takes its course," there’s a food chain in play "and nature never takes a day off."

"First off is that while chickens can be trained to a certain extent, they basically go where they want to go," said Semler. "And when it comes to rounding them up, they make an NFL running back look like an amateur. Another thought to consider is that chickens need care every day. You can’t go to the Bahamas for a week without a chicken sitter." Johnson said backyard growers "need to have an end game. What happens after a chicken stops laying eggs? Do they become a pet?"

Too Many Eggs
Over production sometimes can be as bad as underperforming hens. "Some people will get more chickens than they need," Semler said. "A chicken lays an egg a day, so if you have a dozen in your flock, that’s a dozen eggs a day and you maybe only eat eggs on the weekend because during the week you’re rushing off to work and you just grab a doughnut. I like eggs, but I can’t eat 21 in a week. A family of four can get by with three hens." Johnson said he and his father have 22 chickens between them, more than enough to keep the extended family in eggs.

"I was driving in Hagerstown and remember seeing a red tail hawk take a pigeon out of the air," Semler said. "You can mitigate this problem as long as you give up the romantic notion of free-range. Free range is OK as long as you’re willing to realize that nature takes its course," there’s a food chain in play "and nature never takes a day off."

He suggested making a fenced-in chicken run that’s long and skinny, like a bowling alley. "Hawks won’t go in a space that’s narrow; they don’t feel safe. You have to put a challenge to them killing off your flock. He also mentioned that, “bald eagles are making a comeback and they like chicken, too. Everybody likes chicken.” He added that growers should be on the look-out for the black rat snake that’s fond of stealing eggs from a nest. A snake might chase a mouse into the chicken house and then see the eggs as an easy target.
Semler noted that there is indeed a “pecking order” in a flock. “Chickens are extremely cannibalistic. If blood is drawn during a fight, the end is near.” He said he often gets calls from people who have a bad actor they need to get rid of. “But it’s kind of like mob wars. If a don gets taken out, another one steps in,” bringing up the suggestion that “If you’re introducing a new chicken to the flock, the best time to do it is at night. The worst time is first thing in the morning because they have the whole day to worry about it.”

Semler, who has been with Extension 26 years, loves his job and said he’s particularly taken with the backyard chicken people. “They have no baggage like having to do things the way their dad did. They’re like sponges; they’re an educator’s dream. They really want to learn how to do it and do it right.” In addition to helping out over the phone or by email, he was prompted to start a class that he dubbed Poultry 101. “I limit it to 30 people and one time I had such a waiting list that I did the class twice.”

A Chicken’s Many Pluses

Braxton Griffith’s first chickens were Rhode Island Reds, but his business, Fox Gap Chickens, complete with business cards and a website, has expanded to fancy breeds with equally colorful names like Mille Fleur Cochin and Ameraucana, a breed that features a beard, muffs and a distinctive tail. Even their eggs are special, coming out in beautiful shades of blue. Many of his customers who may have begun with the notion of just gathering eggs, have expanded it to a full-fledged hobby and seek what Braxton called “Eye-poppers. People want a variety of bird that will add color to the flock.”

The teen hatches out 150 to 200 birds during the winter and ships them around the country, or, he will provide customers with fertilized eggs they can hatch themselves. His involvement with chickens—“sure they can be cuddly if you hold or pet them every day”—has led him to consider a future career as a small animal veterinarian. Both Semler and Johnson lauded the advantages for youngsters raising chickens, perhaps as part of a 4-H project. “It teaches them responsibility as well as the basics of biology,” Johnson said.

For the adult, raising chickens in the backyard has an equal number of pluses. “First of all,” said Johnson, “people can tell the difference between a fresh egg and eggs from the supermarket where they may be two or three weeks old. Plus, you can turn garden and table scraps into eggs so you don’t feel bad throwing things away.”

Semler pointed to the hustle and bustle of modern life and said that for him, “if you have the right attitude, raising chickens is a happy time. All my cares go away when I go to gather the eggs.”

HGIC: The Growing Gurus

University of Maryland Extension’s Home and Garden Information Center re-focuses resources to reach more residents

By Sara Gavin

When Baltimore County resident Lisa Airey wanted to make jelly from the crabapple trees on her property in Monkton, she knew she had to do some thorough research first. Were the crabapples edible or merely ornamental? Could they be poisonous?

A quick Google search revealed conflicting information but fortunately, Lisa knew just where to turn: the University of Maryland’s Home and Garden Information Center – better known as the HGIC.
In those kinds of instances, when you have to really have a definitive answer and you just can’t make a mistake, HGIC is where I go,” says Airey. “I trust them.”

The HGIC has been an information hub for gardeners throughout the state of Maryland since 1990. The center was created to be a one-stop-shop for anyone – novices to experienced green thumbs – looking for information on gardening, landscaping, pest management and more.

“HGIC really was a unique model. There was nothing like it prior around the country,” says Jon Traunfeld, who joined the ranks at the HGIC in 1994 and has served as its director since 2007. “It was a bold experiment.”

Now, nearly 25 years later, the HGIC is still a centralized place for tens of thousands of Maryland residents to get fast, research-based responses to their plant- and pest-related questions.

Hotline Heyday
In its early years, the HGIC was best known for its 1-800 hotline service. People could phone in between 8 a.m. and 1 p.m. Monday through Friday and speak directly with a trained horticulturist about whatever was going on in their gardens or yards.

“There were eight phone stations when I first started,” recalls Debbie Ricigliano, who started working at the HGIC in 1997 while finishing up her certificate in horticulture at the Institute of Applied Agriculture. “You could hang the phone up and it would immediately ring. It rang constantly.”

Over the years, staff members have endured their fair share of absurd requests coming in to the HGIC, such as the time a woman mailed in her brassiere because she was convinced she was being bitten by a tiny insect living inside of it. Or the time a man asked for tips on how to kill a tree in his neighbor’s yard to make it look like it died from natural causes.

The experts at the HGIC take pride in finding solutions to every problem, within the law, that comes into the center. They field questions from all skill levels – people who have never planted a single seed to seasoned veterans of the Maryland Master Gardener program; an Extension program that trains volunteer horticulturists to educate the public about how to cultivate garden spaces and landscapes sustainably. However, the consultants are careful to explain not only what to do, but why to do it.

“We’re about more than just helping Mrs. So-and-So tend her pantries,” says Ricigliano, who continues to work at the HGIC after 17 years. “We try to steer the public into more environmentally friendly ways of gardening. So it’s an education process really.”

Growing Goes Digital
In the last 25 years, the HGIC hotline has processed nearly half-a-million phone calls from all over Maryland. However, call volume started to dwindle in the late 90s and then dropped off significantly as more and more people clamored for online resources. The HGIC faculty and staff responded with a web-based Q & A service, how-to videos and new social media channels.

“The trend is toward more social media, more online learning, learning at your own pace when it’s more convenient for you,” says Traunfeld. “Phones are no longer the go-to way to get information.”

For that reason, the HGIC discontinued its phone service in December 2014 in order to concentrate on expanding online content like blogs, videos, fact sheets and e-newsletters. “Our folks answering the phones can contribute more if we move them off the phones and into other activities to help support the website and social media,” says Traunfeld.

People are still able to directly contact the experts at the HGIC with questions. They simply submit a form through the “Ask an Expert” feature on the center’s website, attach a photo if desired, and are guaranteed a response from a certified horticulturist within 48 hours. More than 4,000 questions were processed through the website in 2014 and Traunfeld expects an increase in 2015 as more people learn about the service and become more comfortable using it.

Gardener Lisa Airey says she uses the Ask an Expert feature regularly to help support her extensive home garden where she grows just about anything she can including heirloom tomatoes, garlic, beans, squash, strawberries, onions, peppers, leeks and much more. Airey picked up gardening as a new hobby about five years ago and enjoyed it so much that she decided to enroll in the Baltimore County Master Gardeners program. It was through the Master Gardeners that Airey first learned about the HGIC and she credits the center with helping her cultivate her passion for planting.

“I think a lot of people give up on a hobby or an interest because they hit a wall or can’t get around a wall and when you have resources like the HGIC to help you, it keeps the momentum going,” says Airey. “HGIC provides a safety net.”

And thanks to the HGIC, Airey discovered crabapples are safe to eat and make for some tasty jelly. “It was good – quite tangy,” she says. To learn more about the HGIC or to submit a gardening question, visit www.extension.umd.edu/hgic.
Saving Maryland’s Bees

By Ellen Ternes

Shortly after Tim McMahon planted some cherry trees in his Montgomery County backyard six years ago, he realized something was missing -- bees.

“The trees needed to be cross-pollinated to bear fruit, and it hit me that I hadn’t seen bees in my neighborhood in years,” he said.

So McMahon bought some honey bee hives and put them in his backyard. Today he is an avid beekeeper of 13 hives that keep cherries on his trees and produce honey in the bargain.

But like many beekeepers, McMahon has seen firsthand the results of killers that have been destroying alarming numbers of managed honey bee colonies in Maryland and nationwide. While it’s normal to lose some colonies in the winter, McMahon’s past two years were anything but normal. “I lost 100 percent,” he says.

Dennis vanEngelsdorp, assistant professor in University of Maryland’s Department of Entomology, and his Honey Bee Lab on the College Park campus are working to find out more about the causes of the kind of honey bee death that devastated McMahon’s colonies. Using some innovative research and outreach, they hope to help beekeepers detect problems in their colonies before they are wiped out.

vanEngelsdorp has a thing for bees that started when he was an undergraduate at Ontario’s University of Guelph, the first time he set his eyes on tens of thousands of honey bees swarming inside their hive.

“Everyone should open a beehive once in their lives and see 40,000 bees working together to create liquid gold, or honey,” he says. “It’s amazing. You know you’re a beekeeper right away.”

A lot has happened for vanEngelsdorp since his first hive encounter. He got his own hives, a master’s in apiculture, and today he is a leading bee researcher—he has his own online talks on bees. And he’s seen that the potential consequences of bee devastation reach far beyond empty hives.

“Without bees, much of the food we take for granted wouldn’t be on the table,” vanEngelsdorp says. “One in every three bites we eat is pollinated by bees. Bees rank third in their value as livestock, behind only cows and pigs.”

Compared to some other states -- North Dakota, for example, that with 500,000 has the nation’s most colonies -- Maryland’s honey bee hive numbers are small. In 2014, the Maryland Department of Agriculture reported 14,446 colonies, with hives in every county. A healthy hive has 20,000 to 40,000 bees.

Those bees are critical to Maryland agriculture. In 2012, vanEngelsdorp’s lab calculated the value of honey bee pollination to Maryland crops at more than $26 million -- $10 million to soybeans, more than $9 million to apples and peaches combined. In the process of pollinating, Maryland bees also produced more than 50,000 tons of honey.

And like honey bee colonies everywhere, Maryland’s hives are vulnerable to the killers like those that wiped out McMahon’s colonies. Twenty-six percent of Maryland’s colonies were lost in the winter of 2012.

One of most devastating killers is the Varroa mite, a parasite that infests hives and feeds on the blood of adult and immature honey bees, passing on deadly viruses that wipe out the colony.

Pesticides and habitat destruction are also culprits in honey bee death.

The Honey Bee Lab is taking a state and national lead in understanding these killers. The lab is a founding member and major partner of the Bee Informed Partnership, which lets researchers and beekeepers around the country collaborate to study honey bee health using human epidemiology methods.

In Maryland, the Honey Bee Lab also works closely with PollinaTerps, a group of University of Maryland students, staff, faculty, local scientists and community members who go to community events to educate people about bees and other pollinators.

The Honey Bee Lab also works through Extension to help Maryland beekeepers maintain healthy hives, and they’re planning a survey to find out how many different species live on the College Park campus.

Perhaps most promising for Maryland beekeepers is the Honey Bee Lab’s Sentinel Hive project, an early warning system that will alert Maryland beekeepers in real time to problems in their colonies. Through the university’s crowdfunding program, LAUNCH UMD, the project has raised $23,000 to work hand in hand with beekeepers around the state.

The goal is to put sentinel hives in every Maryland county that has an active beekeeping group. Monitors and traps on the sentinel hives will collect information, such as changes in colony weight, pollen amounts and nectar flow, that could raise a red flag about colony health in the hive’s geographic area.

The information goes to a computer in the Honey Bee Lab, where the team will analyze it immediately. They also will process samples collected from the hives for evidence of Varroa mite and a fungal disease of bees called Nosema. Results will be sent to beekeepers in the sentinel hive’s area so they can act immediately to prevent major damage to their colonies.

“One hive can tell you what’s going on in an apiary,” says beekeeper McMahon. “No one understands why hives die, and after the fact, you can’t tell what tipped the scales. I’m excited about it. I think the Sentinel Hive Project is going to be a big help.”

Find out more about bees in Maryland:

The Honey Bee Lab at the University of Maryland - http://www.vanengelsdorpbeelab.com/
Maryland State Beekeepers Association - http://mdebkeepers.org/
Dennis vanEngelsdorp’s TED talk - http://www.ted.com/talks/dennis_vanengelsdorp_a_plea_for_bees
Community Supported Agriculture

AGNR collaborates with state organizations to make CSAs more efficient for farmers, consumers

According to the 2012 Agricultural Census, 119 Maryland farms use a CSA business model. Though there are various ways of operating a CSA, typically consumers purchase a share of the farm’s products at the beginning of the month, and then receive a box of fruits or vegetables every week. The larger the share purchased, the more fruits/vegetables the consumer should expect to receive during the growing season, which varies from farm to farm.

"From a producer standpoint, money up front allows you to do some specific budgeting, making CSAs a great diversification tool," said Alison Howard, owner of the Homestead Farms CSA in Millington. "For consumers, a lack of control and knowledge about the ups and downs of a farm harvest are a challenge. For example, while everyone gets their money’s worth, if the consumer gets a box of vegetables and I said there would be a half pound a green bean and there are three pounds, or if there is only half a pound when I said there would be three pounds (because the deer ate them or the weather affected the crop) the consumer will feel like everything isn’t specific enough."

Though Howard works to stay in regular contact with her subscribers via email and even provides them with different recipes to use with their produce, she can understand consumer frustrations. "It’s hard when people get upset about (what they receive or do not receive)," Howard said. "Listening to the consumers and what they want is extremely important, and some of our biggest failures have been when we do not listen. There have been times when we are so busy that we felt that we didn’t provide quality customer service, and that will teach you very quickly."

In order to help work through some of these common issues, AGNR and its partners will conduct three farmer-consumer workshops between now and the end of the fall harvest.

From a legal standpoint, "Using a CSA model opens up another market for (farmers), but they need to do research before getting involved to make sure they have production to cover an additional market," Paul Geringer, legal specialist from University of Maryland Extension and the Department of Agricultural and Resource Economics (AREC), said. "The main problem has been that the MDA gets calls each year from subscribers..."
because a farmer has failed to deliver or there is a drought and the farmer has nothing to deliver over the season.”

While weather is a factor no one can predict with perfect accuracy, Goeringer and others involved with the project hope to be able to educate consumers about the risks that go into operating a CSA and to help farmers entering the model understand how to handle potential risks such as drought and crop failure.

Other members of the project team from AGNR include Jim Hanson, Ph.D., a professor in the AREC Department and an Extension specialist interested in local food systems, Ashley Newhall, a legal specialist with a background in agriculture and food law, and Mayhah Suri, a senior majoring in Environmental Science and Policy.

The team will use the grant funding from the USDA to study pre-existing CSA contracts by contacting CSA operators as well as attorneys in the Maryland State Bar Association’s Agricultural Law Section and the American Agricultural Law Association. After analyzing and assessing the contracts, the project participants plan to develop a CSA Contracting Guide, complete with a model CSA contract that future CSA farmers can use.

“I think (CSAs) are an option for farmers to utilize as they continue to feed an expanding world,” Goeringer concluded. “This will help consumers connect more with farmers and understand what goes into running a farm.”

Sladjana Prozo, farm manager at Baltimore’s Big City Farms, says CSAs could potentially play a big part in the “growing movement to understand the methods for growing and producing food by urban dwellers”

“CSAs are unique in the way that customers may be able to come by the farm and interact on a more personal level with their grower, allowing both consumer and producer to learn more about one another and learn in regards to product tastes, preferences, as well as hardships,” says Prozo.

According to Howard, CSAs will continue to get more efficient as farmers and consumers team up on projects like the one the College of AGNR is involved with and find more ways to incorporate technology into the business model.

“CSA is maturing and folks need to decide what portion of the maturation process they want to be a part of,” says Howard.

The USDA-funded Maryland CSA project is scheduled to wrap up on September 30th of this year.

Marylanders are getting back to the basics, turning an old tradition into a new way of eating healthy and remaining self-sufficient while utilizing local food resources. Launched in 2014, the University of Maryland Extension’s “Grow It, Eat It, Preserve It” workshops equip consumers with the tools needed to extend the enjoyment of locally grown produce across all seasons in a safe and economical way.

Canning, whether through a warm bath method or pressure cooking, is a traditional method of food preservation that many affectionately recall as a skill used by their grandparents. However, a survey conducted by The Food Network among people who were interested in home canning revealed that more than 50 percent of responders were under the age of 45, with 26 percent under the age of 35.
Baltimore County Extension Educator Dr. Shauna Henley believes this renewed interest in learning to preserve food across all age groups and demographics has risen from a hon-  
ing in on the farm to fork perspective.  
“One of the biggest reasons I have seen driving the food preservation move-  
ment is wanting to know exactly where your food is coming from coupled with a desire to get back to nature,” said Henley. “There is an element of inde-  
pendence when you can use the land to grow your own food, know how to handle it once it has been harvested and then prepare a healthy meal with the bounty.”

As a trainer of the “Grow It, Eat It, Preserve It” series, Henley also believes the access to locally grown fruits and vegetables across all seasons through farmers’ markets, participation in CSAs and in backyard gardens is another motivating factor for learning to pre-  
serve food.

“I would like more people to have an appreciation of where food comes from. The cycle begins when you go to the grocery store, and the food has been picked and packed and flown around the world,” said Henley.

Henley explains that while it may be tempting to use a recipe passed down for generations, or one found in a grandmother’s collection, science, technology and research over time has created recipes and methods that are now safer.

Classes focus on high-acid canning, jams and jellies, pickles and pickled products, low-acid canning and tomatos. “There are two methods for canning at home and they are not inter-  
changeable for safety purposes,” stated Henley. “High-acid foods are canned in a water bath method, while low-acid foods must be canned in a high-pres-  
sure canner.”

Both methods weigh in rather light on pocket for start-up costs. According to Henley, water bath canning equip-  
ment can be gathered for approxi-  
mately $50, while the pressure canner starts at about $80. UME’s “Grow It, Eat It, Preserve It” workshops vary in price across the state, but all allow partici-  
pants to try out canning methods and equipment before buying. They also supply all fruits or vegetables, lids, jars and an instruction manual, “Complete Guide to Home Canning,” for a quality finished product.

New for 2015 is a focus on food preservation for youth, bringing together the efforts of UME educators from 4-H and Home Economics. “It is the hope to see an increase in both the number of fair entries in the canning division and quality of preserved prod-  
ucts,” said Henley.

In addition to this hands-on workshop series, UME educators are available by phone and email to assist consumers with a variety of home economic topics. For more information, visit http://extension.umd.edu/ foodsafety/food-preservation-and-canning-0.
Why was it important to you to make a gift of this type to the College of AGNR?
I felt it important to give back to the College and Department that was at the center of my enjoyable professional career.

What are some of your favorite memories from your time at UMD and the College of AGNR?
I enjoyed all the students I taught, my colleagues and my opportunities for international program development and travel.

What do you think makes the College of AGNR special or unique?
It has a strong faculty and supportive dean.

Your gift supports a professorship in the Department of Agricultural and Resource Economics. What do you hope the impact of this professorship will be?
Hopefully it will strengthen the recipient’s programs and thus that of the department’s in teaching, research and Extension.

In your opinion, what are some of the benefits of making a donation through planned giving? Why did you personally choose this route?
I feel it is best to plan ahead on where your estate’s assets will achieve their highest and best use. It also allows more time for your bequest to appreciate in value.

**DONOR PROFILE: DR. JOHN MOORE**
Professor Emeritus
Dept. of Agricultural and Resource Economics

**ALUMNI PROFILE**

**PETE CHARLIERIE**
December 2009 Graduate
Agricultural and Resource Economics (AREC) Major

**WHAT IS YOUR CURRENT PLACE OF EMPLOYMENT?**
SunSplash Farm LLC

**WHAT IS YOUR CURRENT JOB TITLE AND DESCRIPTION?**
I am President (Owner/Operator). I am responsible for human resources, production, marketing and sales.

**HOW DID YOUR EDUCATION AT UMD PREPARE YOU FOR YOUR CURRENT ROLE?**
Getting insight to the field of Agricultural Economics and business courses provided by UMD enabled me to enter the business world with a high level of proficiency in skills that lenders/investors were looking for in a start-up company. That expertise is utilized on a daily basis to fulfill my daily responsibilities, while running an agribusiness.

**WHAT IS YOUR FAVORITE MEMORY AT UNIVERSITY OF MARYLAND?**
I enjoyed the time spent in between studying into the late night with classmates from all over the world; most of whom I am still in contact with.

**ANY ADVICE FOR CURRENT COLLEGE OF AGNR STUDENTS?**
Use the time that you have at UMD for networking with fellow students and professors; ask the latter for advice about your future plans with respect to education and entrepreneurship. Use them as consultants, when the opportunity presents itself.
Approximately 80 students in the College Park Scholars program traveled to the College of AgNR’s research facility in Upper Marlboro as part of the annual Scholars Service Day on August 28th. There was plenty of work to be done including pulling weeds in the orchard, picking grapes in the vineyard and preparing row beds for fall planting at Terp Farm – the university’s new sustainable vegetable farm that will help provide produce in campus dining halls and to community food banks this semester. This is the fourth year the College of AgNR has hosted scholars at the Upper Marlboro facility for Service Day. While researchers with ongoing projects at the farm benefit from a few hours of free labor provided by the students, the incoming freshmen also get an opportunity to learn about agriculture and to spend time on a farm – a first for many.

Students, faculty, alumni and staff from the College of Agriculture and Natural Resources spent their final 11 days of summer helping to make the 2014 Maryland State Fair: From ushering in new life at the birthing center to showcasing UMD’s very own dairy herd for fairgoers to organizing an intense 4-H robotics competition, AgNR representatives could be found all over the state fairgrounds in Timonium.

Thousands Brave Rain, Clouds for Fall AgNR Open House

Despite overcast skies, intermittent rain and chilly temperatures, approximately 2,200 people traveled to the Central Maryland Research and Education Center on Saturday, October 11, for the annual College of Agriculture and Natural Resources (AgNR) Open House.

The College of AgNR has been hosting this free, family-oriented, fall-themed event at its Clarksville facility in Howard County since 2006. Each year the Open House draws visitors from all over the state to experience a variety of fun, educational activities designed to increase awareness of Maryland agriculture and natural resources, as well as the programs offered through the College of AgNR and University of Maryland Extension.
Maryland 4-H Zero Robotics Team Wins National Competition

A 4-H Zero Robotics team from Wicomico County, Empower Wicomico, won a national competition held at NASA’s Goddard Space Flight Center in Greenbelt this summer. Led by 4-H STEM faculty Extension Assistant Celine Pastore, the team participated in a five-week session over the summer where they learned to program SPHERES (Synchronized Position Hold Engage and Reorient Experimental Satellites) that are located on the International Space Station. At the regional level of competition, the Empower Wicomico team’s code was ranked as the highest scoring program in the region and was selected for national competition.

First Place in National Poultry Judging

A group of Maryland 4-Hers were overall team champions at the 2014 National 4-H Poultry and Egg Conference held November 19-20 in Louisville, Kentucky. Team members included (from left) Natalie Panagopoulos of Carroll County, Ray Martin IV of Frederick County, Coach Angela Livezy, Drew Ridgeway of Carroll County, Noah Lawrence of Carroll County and Coach Dr. Nicholas Zimmerman from University of Maryland Extension.

AG-Mazing Students

Standout Student Studies Link Between Diet and ADHD

You are what you eat, or at least that’s what UMD junior Karishma Patel believes. The nutritional sciences and physiology/neurobiology double major is investigating a link between nutrition and Attention Deficit Hyperactivity Disorder (ADHD).

A member of the Gemstone Honor program—a four-year interdisciplinary program in which students develop and conduct their own research projects—Patel says she was inspired by increasing diagnoses of ADHD in conjunction with the increased use of food additives in the diets of modern day children. “Diet is an important link to ADHD because families realized that the standard psychostimulant drug treatment has negative side effects on children... so families look to alternative dietary treatments where patients eliminate certain substances from their diet or take supplements to improve symptoms,” Patel said. “Our team is specifically looking at yellow food dye and the effects it has on ADHD symptoms.”

Formerly known as tartrazine, yellow food dye has been found to cause hyperactivity and allergic reactions in numerous consumers, causing many countries to ban the substance altogether. “We hope our research contributes to eliminating tartrazine in an ADHD patient’s diet,” Patel said.

Dietetics Majors Help Fight Hunger with Community Food Bank

Dietetic majors in the College of Agriculture and Natural Resources are doing their part to help ensure that no university students, faculty or staff go hungry.

That’s why the University Health Center, Dining Services and volunteers from the student Food and Nutrition Club are working with the University Health Center and Department of Dining Services to organize a food bank for the UMD community.

“It’s great for all of the people in need,” Leah Cramer, senior dietetics major and Community Outreach Officer for the Food and Nutrition Club, said. “Obviously, there are a lot of people outside of the UMD community who are in need of services like this, but it’s important to recognize that there are many people right here in our own community who can really benefit from this great new resource.”

Food distributions began October 22nd in Cole Field House and continue to take place alternatingly one Wednesday and one Thursday every month. Anyone is welcome, and food is distributed based upon the needs of the individual and their number of dependents.

Undergraduates Go “Down Under” to Discuss Urban Development

Five University of Maryland students, including three from the Department of Environmental Science & Policy, gathered in Sydney, Australia alongside undergraduates from around the world to learn about sustainable urban development via the Universities 21 Undergraduate Summer School.

The Summer School event, which took place July 2-17 at the University of New South Wales, focused on the theme “Shaping the Future City.” Students were asked to submit an essay explaining their interest in urban development and environmental issues to the university, which funded the trip to Australia for those selected.

Agriculture in Angers, France: Students Study Abroad

Five upperclassmen from the College of Agriculture and Natural Resources spent a month this summer studying abroad in Angers, France in a unique living-learning experience. At the Ecole Superieure d’Agriculture, students were able to immerse themselves in French culture and customs while also taking courses on French and European civilization, sustainable agriculture and wine and regional food product development.

The intense experience allowed students to compare food systems in France with those here in the United States by visiting local farms and markets. For the trip’s duration, each student lived with a host family, providing them with the first-hand opportunity to witness the role that food plays in French homes. Specifically, some students enjoyed two-and-a-half-hour meals, while others learned how to make cheese, bread and wine.

Students Stepping in the Right Direction: Agriculture Forward at Maryland

This fall, the Institute of Applied Agriculture officially admitted the university’s first five “Agriculture Forward at Maryland” (Ag Forward) students.

The Ag Forward program is designed to help students pursuing a two-year IAA certificate transition to a four-year degree track in the College of Agriculture and Natural Resources at UMD.

“I hope to gain a better understanding and appreciation for agriculture, and I believe that one of the main benefits of this program is being able to have a more concentrated study and begin studying in your major from day one,” said freshman sustainable agriculture major Justin Hripp, who started with Ag Forward during the fall 2014 semester.

For more information, students may visit www.iaa.umd.edu, attend an IAA Open House, or contact April Brohman, Assistant to the Dean for Recruitment, at 301-314-7222, or Christina Lorenz, IAA’s Student Services Coordinator, at 301-405-4686.

Green Space in the Living Space: Green Dorm Room Project

On Friday, September 5, students from all different colleges and residence halls came together to take part in the “Green Dorm Room Project” at Jull Hall.

The plan was simple: students were asked to take at least one of the 700 available houseplants and keep that plant in their dorm room, at no charge whatsoever.

Ten different plant species were available for selection due, in part, to the $300 grant that Institute of Applied Agriculture Instructor Ken Ingram was awarded by the Pepsi Enhancement Fund, a fund which supports programs or events that help create campus community, appeal to campus citizen and further the academic mission of the university. Ingram’s students also greatly contributed to the project’s success, helping to cut, transport, label and distribute the plants.

AGN-complishments

AGNR Researchers Awarded $1.6 Million to Fight Flu in Pigs

Researchers from the Department of Animal and Avian Sciences (ANSC) will soon test a cutting-edge approach for eradicating the most ancient disease known to mankind—flu—thanks to a $1.6 million grant awarded by the USDA’s National Institute of Food and Agriculture (NIFA).

Led by Bhanu Telugu, Ph.D., an assistant professor in the ANSC Department, the research team will use advanced genome editing technologies to engineer flu resistance in pigs and prevent the flu from spreading to other pigs and to humans, who can contract the virus from swine. Scientists will do this by deleting receptors in the pigs’ genetic codes to block the virus’ entry and inserting what are called “decoy” genes to prevent the disease from replicating.

Telugu is hopeful he and his team can use the domestic pig as a model for fighting the flu in humans and other species.

The five-year study will be conducted at the Animal Bioscience and Biotechnology Laboratory, a building jointly owned by the University of Maryland and the USDA and one of only a handful around the world equipped with the biomedical tools necessary for this type of research.
Taneyhill Lab Receives $1.9 Million to Study “Glue” Important in Development, Disease

Lisa Taneyhill, Ph.D., an assistant professor in the Department of Animal and Avian Sciences, has been awarded a $1.9 million research grant from the National Institute of Dental and Craniofacial Research at the National Institutes of Health (NIH). Using chick embryos, Taneyhill and her colleagues will try to uncover how two different cell types migrate and adhere to each other to form the cranial ganglia — a cluster of nerve cells responsible for receiving sensory information like taste, touch and smell. These cellular interactions are critical throughout embryonic and adult development to form new tissues and organs, with abnormalities resulting in animal and human diseases or defects such as certain cancers, cleft palate and heart conditions.

“Essentially, we’re looking at the proteins — or the ‘glue’ — that keeps these two cell types together,” explains Taneyhill. “If we are able to figure out why and how these cells interact, it will give us insight into how other tissues are formed and could even lead to advances in therapies based on organ repair and regeneration.”

Taneyhill, who was trained as a cancer biologist, says this project could serve as “an excellent model for cancer research, particularly how cancer cells become invasive” because cancer cells can act similarly to those she will be studying inside the chick embryos. The grant from the NIH will fund five years of research on this subject.

Veterinary Medicine Scientist Awarded Funding to Further Lyme Disease Research

With more than 300,000 new cases per year, according to newly revised estimates from the CDC, Lyme disease continues to be a persistent threat to public health in the U.S. Yet a vaccine to prevent the often devastating complications of human infection is still unavailable. Dr. Upal Pal, an associate professor from the Department of Veterinary Medicine, has been on the front lines in the war against Lyme disease for the last five years and is considered a worldwide leader on the subject. This year, the National Institutes of Health (NIH) awarded Pal $1.5 million to continue his quest to eradicate Lyme disease.

Pal and his research team first began studying Borrelia burgdorferi — the bacteria that causes Lyme disease — at the University of Maryland in 2006, and received an initial $1.5 million research grant from the NIH in 2009. Since then, Pal and colleagues have learned a lot about the curious bacteria that can adapt to and survive in a variety of different hosts including deer ticks, mice, dogs and humans, who contract the bacteria from deer ticks.

“Borrelia is so interesting because it doesn’t actually produce any toxins that we know of but induces an immune response in the body that causes inflammation,” says Pal. “It also looks different inside each host it infects.”

Inside his state-of-the-art lab, Pal’s team grows Borrelia in test tubes, genetically modifies the pathogen, and uses it to infect ticks at different stages of development to figure out which components of the bacteria help it to survive. Pal is credited with identifying a number of proteins that contribute to Borrelia’s robust nature and pinpointing genetic markers that could serve as new targets for diagnosis and prevention of Lyme disease. In this next phase of research, Pal and his team will work to further understand the biology of Borrelia and host responses during infection with the ultimate goal of creating a human vaccine.

Center for Food Safety and Security Systems Awarded $4.6 Million to Help Protect Food Supply

The Center for Food Safety and Security Systems (CFSS) was awarded a two-year grant extension for $4.6 million for an extensive, multi-institutional project dedicated to developing scientifically based food safety metrics for tomatoes and leafy greens. The Specialty Crop Research Initiative (SCRI) grant was awarded by the USDA’s National Institute of Food and Agriculture. During the first phase of this project, which started in October of 2011, researchers conducted greenhouse, field and validation trials to test some of the current food safety measures required by the government and the produce industry. The work has been highly supported by both the produce industry and the FDA as the Food Safety Modernization Act (FSMA) Proposed Rule for Food Safety is moving closer to finalization.

The next phase of the project will focus on working with small- to medium-sized farmers and industry partners to test the effectiveness of practices related to water sources, animal encroachment and adjacent land use, harvesting and processing, and temperature control in various regions of the U.S. in order to make more concrete recommendations for proposed food safety regulations.

The project team includes researchers from University of Maryland, College Park, University of Delaware, Ohio State University, University of Florida, University of California-Davis, University of Arizona, Rutgers University, University of Maryland, Eastern Shore, FDA and USDA BARC.

AGNR Scientists Strive for more Sustainable Strawberry Fields

Researchers from the Department of Plant Science and Landscape Architecture (PSLA) are helping to design the strawberry field of the future — one that conserves water, utilizes less fertilizer, has enhanced frost protection and is more cost-efficient, all while producing the sweetest berries possible.

“The UMD project is part of the National Strawberry Sustainability Initiative funded by a grant from the Walmart Foundation and administered by the University of Arkansas Center for Agricultural and Rural Sustainability. More than a dozen land-grant colleges and universities across the country are involved with the initiative. Led by plant science professor John Lea-Cox, Ph.D., the UMD research team is implementing wireless sensor networks in strawberry fields at three locations in Maryland. These advanced sensor networks consist of radio nodes with sensors placed in the soil, in the plant canopy and weather stations, to collect precise data on environmental conditions, soil moisture and temperature and fertilizer concentration.

“Water scarcity due to drought is a serious problem affecting production in the major strawberry growing regions of the country,” said Lea-Cox. “Here in the mid-Atlantic region specifically, current environmental regulations limit the amount of agrochemicals like pesticides and fertilizers that can be applied to strawberry farms. That’s why farmers need specific information about their practices to address these concerns, if sustainable strawberry production is to be achieved.”

Using wireless sensor networks, farmers can access information from their fields in real-time using a computer, smart phone, tablet or any other device connected to the internet. They can also set up alerts to be sent via text message or email letting them know when an event occurs such as when soil moisture drops below a spe-
Faculty members from the College of AGNR were part of a team recently honored with a prestigious award from the U.S. Department of Agriculture (USDA) for a project aimed at improving the lives of women in Afghanistan.

**James Hanson, Ph.D.**, an Extension specialist and professor in the Department of Agricultural and Natural Resources, leads the University of Maryland’s Women in Agriculture (WIA) program. The WIA project prepares female Extension educators and leaders in Afghanistan to empower poor or vulnerable women living in Kabul by teaching them how to provide food for their own families. It focuses on developing skills and practices like vegetable gardening, small-scale poultry production, composting to improve soil quality, postharvest handling, food preservation, preparation of nutritious meals and marketing agricultural products, all to increase food security for women living in some of the poorest areas of this war-torn country. WIA is part of the Afghanistan Agricultural Extension Project, a collaborative effort with three other land-grant universities led by the University of California, Davis to assist Afghanistan in strengthening its agricultural extension system and stabilizing its agriculture-based economy.

Hanson, along with Rebecca Ramsing, food security and nutrition advisor for WIA, and Sophia Wilcox, Deputy Chief of Party for the WIA project, were all named to the group of recipients for the 2014 USDA Secretary’s Honor Award in the category of increasing global food security. Hanson, Ramsing and Wilcox joined their counterparts from the other three universities to be honored.

**UMD Program Shares National Award for Work in Afghanistan**

Two AGNR professors emeritus from the Department of Animal and Avian Sciences (ANS) at the University of Maryland have been named Fellows of the American Association for the Advancement of Science (AAAS). Election as an AAAS Fellow is a prestigious honor bestowed upon AAAS members by their peers.

As part of the Agriculture, Food and Renewable Resources Section, *Ian Mather, Ph.D.*, was elected as an AAAS Fellow for distinguished and original contributions in mammary gland biology, especially the characterization of milk proteins and elucidation of basic mechanisms of milk secretion. Mather joined the University of Maryland in 1975, became an Associate Professor in 1980 and Professor in 1985. He retired and became an Emeritus Professor in Sept. 2011.

**Mary Ann Ottinger, Ph.D.**, was named an AAAS Fellow in the Biological Sciences Section for distinguished contributions to the field of neuroendocrinology, with particular emphasis on regulation and endocrine disruption of reproduction in avian systems. Ottinger joined the University of Maryland as an Assistant Professor in 1978, became an Associate Professor in 1983 and a Professor in 1989. She left Maryland in 2013 to become the Associate Vice Chancellor for Research at the University of Houston. Ottinger received a bachelor’s degree, master’s degree and Ph.D. in zoology from the University of Maryland.

**UME Receives National Education Award for Community Health Insurance Program**

The American Association of Family and Consumer Sciences (AAFCS) honored a team from University of Maryland Extension with the 2014 Family Economics and Resource Management (FERM) Education Award at a ceremony in St. Louis, Missouri last month. Bonnie Braun, Lynn Little and Virginia Brown led UME’s award-winning team in the development of an educational program called Smart Choice Health Insurance.

Smart Choice Health Insurance teaches consumers how to purchase and use health insurance. Consumers attend a two-hour workshop in which they are equipped with the tools, understanding and confidence needed to make the best possible decision when choosing a health insurance plan. Currently Smart Choice has 89 certified educators to conduct the workshops in 25 states throughout the U.S.

**New Report Highlights Legal Challenges Facing Maryland’s Agricultural Community**

The Maryland agricultural community is facing a diverse and complex set of legal challenges, but experts with the Agriculture Law Education Initiative (ALEI) now have a better understanding of priority problems and can begin to address them head-on. This fall, the ALEI published the results of a legal needs assessment for the state’s agricultural sector—the first of its kind in Maryland.

“The biggest finding to me is that we learned Maryland agriculture as a whole has very diverse legal needs,” said Paul Goeringer, Extension legal specialist with UMD’s College of Agriculture and Natural Resources, and co-author of the report. “There are some blanket statewide concerns but when we started breaking it down by region, we saw issues related to production contracts ranking near the top on the Eastern Shore and, as you go west, questions about land use and leasing rank near the top.”

The ALEI is a collaboration under the University of Maryland: MPowering the State, and combines the expertise and efforts of three distinguished Maryland institutions: the Francis King Carey School of Law at the University of Maryland, Baltimore (UMB); the College of Agriculture and Natural Resources at the University of Maryland, College Park (UMD), and the School of Agricultural and Natural Sciences at the University of Maryland, Eastern Shore (UMES).
The AGNR Alumni Association once again hosted a homecoming tailgate at the Campus Farm before the Terps took on the Hawkeyes from the University of Iowa. All enjoyed great food, fellowship, fun… and a Terps win!

CAMPUS FARM REVITALIZATION RECEIVES DONATION FROM AG INDUSTRY LEADERS

Farm Credit made a donation of $210,000 to the College of AGNR’s Campus Farm Revitalization Project. Two Farm Credit presidents — both alumni from the College of AGNR — made a trip to the College Park campus this fall to tour the facility and announce their intentions for the gift. Greg Farmer, President of Colonial Farm Credit is a 1976 animal science graduate. MidAtlantic Farm Credit President Bob Frazee graduated in 1977 with a degree in agricultural and Extension education. For their donation, Farm Credit will receive the naming rights for the conference room and classroom to be located inside the newly-constructed teaching pavilion as well as the bleachers overlooking the lager Covered Livestock Ring.

Outstanding Alumnus

Budhan Pukazhenthi, M.S. ’92, Ph.D. ’96, was recognized as the College of AGNR’s 2014 Outstanding Alumnus during the winter commencement ceremony. A graduate of the animal science department, Pukazhenthi currently works as a reproductive biologist at the Smithsonian Conservation Biology Institute.

Golden frogs, white rhinos, polar bears, Arabian horses: These are just some of the endangered species recent graduates and students from the College of AGNR are helping to protect and preserve through reproductive research. Two May AGNR graduates and one senior animal science major spent time last summer interning at facilities in Washington, D.C., Memphis, TN, and San Diego, CA, working to help wildlife survive extinction.

Animal science senior Delaney Honeyford, for example, has been working at the Center for Species Survival at the Smithsonian National Zoological Park in Washington, D.C. Hanum Wensil-Strow, an animal science senior and policy dual degree graduate, helped conduct research on horses but also assisted with genetic material collections from a polar bear and a white rhino — which she calls the highlight of her internship.

“Tam always been passionate about wildlife and saving species, but seeing an animal like that up close while surrounded by such passionate and caring people, is truly an unforgettable and inspiring experience,” said Wensil-Strow.

MEMORABLE MARYLANDERS

Remembering Dr. Brian Bequette

Dr. Bequette joined the University of Maryland faculty in 2001. His research focused on nutrient metabolism in animals and he taught several undergraduate and graduate courses for the department and was an advisor for the Gemstone Program in the Honors College at UMD.

Those who knew Bequette well — his colleagues and students — say his passion, optimism, and smiling, approachable personality will live on through the people he worked with, instructed, mentored and inspired.

“Dr. B, as he liked to be called, was always full of enthusiasm, not just for his class material but also for his students in general,” said Monica Capella, who served as Bequette’s teaching assistant. “He had an amazing way of remembering students that he had taught several years beforehand and made sure to keep himself up to date on their lives. My favorite quality about him was that he was always honest. He shared stories about his mistakes with students to show them that he could relate to their struggles and hoped to help them learn from his past.”
John M. Curtis Sr., retired director of University of Maryland Extension and former department chair, died Dec. 7, 2014, at the age of 91. He was a resident of Hampstead, NC, at the time of his death.

He was born in Franklinville, NC, son of the late R.C. and Ora Bray Curtis. After graduation from Franklinville High School, he began a career in university education and administration with a parallel career of military service, both active duty and in the Army Reserve.

He entered NC State College in September 1940 and joined the U.S. Army R.O.T.C. unit there. Called to active duty in WWII, he served almost four years in the U.S. Army Infantry. After completing O.E.S., he led troops in England, France, Germany and Austria. He was awarded a number of medals, including the Bronze Star (combat), Purple Heart and Combat Infantryman’s Badge. He remained active in the U.S. Army Reserve and retired in 1976 with the rank of colonel.

He returned to NC State College after the war and completed his bachelor’s and master’s degrees, then enrolled in the University of Maryland for his PhD degree. All degrees were in agricultural economics with minors in economics and marketing. He married Pauline A. Dahiquist in 1948 and she was a devoted and vital ally during his graduate study and throughout his career and retirement, a period of 66 years. He was a member of the faculty at VPI, NC State and the University of Maryland for a combined total of 31 years.

After working at VPI and N.C.S., he returned to the University of Maryland as professor and head of the Department of Agricultural and Resource Economics and was later appointed state director of the Maryland Cooperative Extension Service (MCES) where he served until his retirement in 1985.

In addition to his family and administrative duties, he wrote a large number of articles and publications in agricultural economics, marketing and management and presented seminars in the U.S., Europe, Asia and Africa. He was a visiting senior scholar at the East-West Center at the University of Hawaii. He was a member of many scholastic, honors, professional, fraternal and social organizations.

He was preceded in death by his parents; brothers, Edison M. and Bill; sisters, Ava C. Hughes and husband, Polly and William R. Curtis, Sr.; and his beloved Elaine Lee for over 50 years. He was married to his beloved wife, Suzanne, grandson, Charles W. Curtis and granddaughter, Jacqueline F. Curtis; son, Gary C. Curtis, his former wife, Leslie and granddaughter, CaHlin; sister, Mary C. Wallace, and many nieces, nephews and great-nieces and great-great-nephews, in North Carolina, other states and countries.

A memorial service was held December 13, 2014, at the Topsail Presbyterian Church in Hampstead. Contributions may be made to the cemetery organization at Topsail Presbyterian Church, 16249 Highway 17, Hampstead, NC 28443.

ANDREW ADRAIN DUNGAN ’56 died July 31, 2014 in Corvallis, Oregon. He was 93.

Andrew was born March 13, 1921, in Pencaitland, Scotland, just outside Edinburgh. When he was 12, his parents and sister immigrated to Baltimore. After high school, he joined the U.S. Army, and was dispatched to England and Germany during World War II. He found his niche in the Veterinary Corps. He met Hazel, who was in the Royal Corps and became his first wife, and later moved back to Maryland. With the help of the G.I. Bill, Andrew got a degree and completed a doctorate in horticulture in 1956 at the University of Maryland.

In 1956, he began his career as an Extension Specialist at Oregon State University in Corvallis where he contributed his expertise to improving the production of food crops, particularly vegetables, worldwide. He headed the Horticulture Department at the University of Minnesota in 1970 and became Director of the Tropical Research and Education Center at Homestead, University of Florida, in 1976 where he and his team refined lime production methods, making the fruit available for retail sale nationwide for the first time.

Andrew retired in 1986 and returned to Corvallis as a Horticulture Professor Emeritus at OSU. During his career, and after retiring, he was a regular consultant to the U.S. Department of Agriculture and the United States Agency for International Development, devising agricultural programs in Morocco, India, Haiti, Bangladesh, Yemen, Saudi Arabia, the Philippines and China.

He is survived by his wife, Virginia; children, Rod, Bonnie and Laura; eight grandchildren; and 11 great-grandchildren. He was preceded in death by his parents; sister, first wife, Hazel and their son, Ian; and second wife, Diana.

Dr. Michael Marvin Forney, husband, veterinarian, veteran, outdoorsman, world traveler and philanthropist, passed away peacefully on New Year’s Eve, Dec. 31, 2014, at age 73. He died from complications related to pancreatic cancer and resided near Kennebunkport, Maine. He was born in DeKalb, Illinois, the son of Dr. Michael M. and Laura; eight grandchildren; and 11 great-grandchildren. He was preceded in death by his parents; sister, first wife, Hazel and their son, Ian; and second wife, Diana.

Dr. Forney is survived by his wife, Kirsten, and his children: a daughter, Laura Michelle Forney and her husband, Ron Sadler, of Gettysburg; Pa., and two sons, Kyle Forney and his wife, Rhonda, of Gaithersburg, and Rob Forney and his wife, Lisa, of Germantown. He is also survived by a stepdaughter, Michelle Timmons, and her husband, Trey Timmons, of Gaithersburg, and eight grandchildren and four great-grandchildren. The veterinarian accompanied the herd on their flight south and remembered landing in Miami to retrieve a piece of the herd before the journey resumed.

Dr. Forney was born in Detroit, Mich., to Robert Landfork Forney and Mildred Forney on Oct. 17, 1941. His father had moved there to teach school before returning with his family to Chestertown in 1953. He graduated from Chestertown High School in 1958 and immediately joined the Air Force, heading off to Lackland Air Force Base in Texas for basic training. He ran as a veterinarian for the Bustamante for the Chrstertown Rotary Club and as a director for Kent and Queen Anne’s Hospital.

Dr. Forney was survived by his wife, Kirsten, and his children: a daughter, Laura Michelle Forney and her husband, Ron Sadler, of Gettysburg, Pa.; and two sons, Kyle Forney and his wife, Rhonda, of Gaithersburg, and Rob Forney and his wife, Lisa, of Germantown. He is also survived by a stepdaughter, Michelle Timmons, and her husband, Trey Timmons, of Gaithersburg, and eight grandchildren and four great-grandchildren. The veterinarian accompanied the herd on their flight south and remembered landing in Miami to retrieve a piece of the herd before the journey resumed.

Dr. Forney was born in Detroit, Mich., to Robert Landfork Forney and Mildred Forney on Oct. 17, 1941. His father had moved there to teach school before returning with his family to Chestertown in 1953. He graduated from Chestertown High School in 1958 and immediately joined the Air Force, heading off to Lackland Air Force Base in Texas for basic training. He ran as a veterinarian for the Bustamante for the Chrstertown Rotary Club and as a director for Kent and Queen Anne’s Hospital.

Dr. Forney was survived by his wife, Kirsten, and his children: a daughter, Laura Michelle Forney and her husband, Ron Sadler, of Gettysburg, Pa.; and two sons, Kyle Forney and his wife, Rhonda, of Gaithersburg, and Rob Forney and his wife, Lisa, of Germantown. He is also survived by a stepdaughter, Michelle Timmons, and her husband, Trey Timmons, of Gaithersburg, and eight grandchildren and four great-grandchildren. The veterinarian accompanied the herd on their flight south and remembered landing in Miami to retrieve a piece of the herd before the journey resumed.
Maryland and finally Delaware. He is also survived by four brothers and sisters: Geraldine Hadaway of Rehoboth Beach, Dennis Forney and his wife, Becky, of Lewes, Mary Paterson, and her husband, Pat, of Wilmington, N.C. and Dr. Raymond Forney of Newark; and a step-sister, Mary M. Vandenbranden and her husband, Leif, of Fairlee.

Memorial donations may be made to Humane Society of Kent County, 10720 Augustine Herman Highway, Rock Hall, Md. 21660; the Kent Association of Riding Therapy (KART), P.O. Box 126, Worth, Md. 21678; or the Animal Welfare League of Queen Anne’s County, 201 Clay Drive, Queenstown, Md. 21658.

Dr. Fred Ross Shank II '69, died January 24, 2015 in Reston, Virginia. Dr. Shank was born October 11, 1940 in Harrisonburg, VA, and graduated from Turner Ashby High School and the University of Kentucky. He received his B.A. in Nutrition in 1967 from the University of Maryland in 1969.

After serving in the United States Air Force, he joined the U.S. Department of Agriculture before embarking on a distinguished 22-year career with the Food and Drug Administration. As Director of the Center for Food Safety and Applied Nutrition he led the development of policies and programs focused on consumer protection, including the implementation of the Nutrition Labeling and Education Act of 1990, the most comprehensive food labeling legislation in U.S. History. Upon retiring from public service, he served as Vice President at the Institute of Food Technologists, promoting food science and developing solutions for the global food infrastructure.

Concurrently, Fred was Owner and President of Shank Wholesalers, Inc., and Coldstream Farms of Harrisonburg and Mt. Crawford, VA, respectively.

In retirement he was an avid fan of the Washington Nationals and Redskins, as well as his beloved Maryland Terrapins. He served as president of the College of Agriculture, Food and Resource Alumni Board and received the Outstanding Alumnus in 1998 for meritorious service to agriculture and natural resources.

He is survived by his wife of 47 years, Peggy Shank, two children and their spouses, Virginia and Edward Conner, and Fred Ross Shank III and Christopher Fisher. He was grandfather to Alison and Lauren Conner, and Aidan Fisher-Shank.

Services were held January 29, 2015 in Harrisonburg, VA. Memorial donations can be made to the Dr. Fred Ross Shank Memorial Endowment, which provides an annual scholarship for graduate students of University of Maryland’s Department of Nutrition and Food Science. Checks should be payable to University of Maryland College Park Foundation with the memo line stating “Dr. Fred Ross Shank Memorial Endowment” and sent to Leslie Joyce, AGNR-Development Office, University of Maryland, 1124 Symons Hall, College Park, MD 20742.

WALTER F. WILLIAMS, PH.D., 86, of Punta Gorda, Fla., died Saturday Sept. 20, 2014, at home, surrounded by the love of his family. Walt was born October 7, 1927, the first child of Frank Lyons Williams and Ruby Ford Williams, in Yazoo City, MS.

Dr. Williams retired as Professor Emeritus from the University of Maryland after 39 years teaching animal science, inspiring graduate students and conducting research at the College Park Campus. He was awarded his Bachelor of Arts degree in 1951, his Master’s degree in 1952, and his Doctorate in 1955, all from the University of Missouri. His graduate research was under the mentorship of P.J. Turner, a founder of lactation physiology in the USA.

Dr. Williams pioneered the use of radio-isotope to detect the localization of protein and steroid hormones in the mammary gland and other tissues of the rabbit. Dr. Williams was an inspiration to developing Maryland undergraduate and graduate students through his courses Physiology of Reproduction and Physiology of Milk Secretion. He provided the latest and most extensive treatises of his lectures, and his laboratories introduced cutting edge techniques and approaches in the study of cellular biology of mammary and epithelial tissues. He taught students to be insightful in their deductive reasoning, as part of the scientific method. Dr. Williams was always at the early frontier of investigation in several College Park-College of Agriculture and Life Sciences interdisciplinary projects.

His research with the bovine uterus included pioneering studies of the estrous cycle and early pregnancy that are now understood after 3 to 4 decades of investigation, with the application of tools in cellular and molecular biology. Similar basic advances were made in the control of placental function that helped define the causes of fetal membrane retention after parturition.

Dr. Williams collaborated throughout his career with colleagues and students at the USDA Beltsville Research Center, among other universities. His basic and applied research in the areas of reproduction, lactation and physiology contributed greatly in integrating graduate training between the USDA and University of Maryland. He graduated students through the University of Maryland in Egypt, and facilitated research through cooperative projects in Egypt and Kenya. Even as he approached retirement, Dr. Williams served as President of the American Association of Bovine Practitioners, and Associate Dean, providing a continuum of advice, motivation and wisdom to new faculty across the College of Agriculture; tracks and students throughout his professional and personal experiences. His life’s work contributed greatly to our knowledge of the physiology of dairy cattle and other bovine species.

In retirement, he served as treasurer of the Audubon Society and volunteered at archelogical digs in both Maryland and Florida, where he pursued his interest in archaeology. Like his father, he continued to research his family line, documenting his family history and the family genealogy. His inventions are grandchildren Margaret, Peter, Katie, Jasmine, Morgan, Brandon and Teresa, great-grandsons Perry and Alex, and the first great-granddaughter, Elizabeth. He was preceded in death by his daughter Dr. Elizabeth Williams and his brother Dr. Tom Thorne, and young sons from a previous marriage to his wife Jo. His family and friends will celebrate Dr. Williams’ life one more time in Maryland. A summer solstice good-bye from 11 a.m. to 5 p.m. on Saturday, September 19, 2015, at Chesapeake Beach Resort, 4165 Mears Avenue, Chesapeake Beach, MD 20732, (410) 257-5596.

For those who would like to express their condolences, the family welcomes donations in his memory to support the grant set up in the name of his daugther and her husband, who both dedicated their professional lives to saving our wildlife. Beth Williams & Tom Thorne Wildlife Disease Training Fund, c/o UW College of Agriculture and Natural Resources, 1,000 E. University Ave. Dept. 3354, Laramie, WY 82070.

As a lifetime history buff, he enjoyed all authors, but his favorites were Mark Twain and Abraham Lincoln.

He is survived by his wife, Dr. Jo, and Josephine Muehrer, sister Linda Hersperger and husband Dr. Webb Hersperger, daughters and sons-in-law Lin and Jim Heinrich, Anne Staley, and Brandi and Kevin, all of whom are grandchildren Margaret, Peter, Katie, Jasmine, Morgan, Brandon and Teresa, great-grandsons Perry and Alex, and the first great-granddaughter, Elizabeth. He was preceded in death by his daughter Dr. Elizabeth Williams and his husband Dr. Tom Thorne, and young sons from a previous marriage to his wife Jo. His family and friends will celebrate Dr. Williams’ life one more time in Maryland. A summer solstice good-bye from 11 a.m. to 5 p.m. on Saturday, September 19, 2015, at Chesapeake Beach Resort, 4165 Mears Avenue, Chesapeake Beach, MD 20732, (410) 257-5596.

For those who would like to express their condolences, the family welcomes donations in his memory to support the grant set up in the name of his daugther and her husband, who both dedicated their professional lives to saving our wildlife. Beth Williams & Tom Thorne Wildlife Disease Training Fund, c/o UW College of Agriculture and Natural Resources, 1,000 E. University Ave. Dept. 3354, Laramie, WY 82070.

For those who would like to express their condolences, his family welcomes donations in his memory to support the grant set up in the name of his daugther and her husband, who both dedicated their professional lives to saving our wildlife. Beth Williams & Tom Thorne Wildlife Disease Training Fund, c/o UW College of Agriculture and Natural Resources, 1,000 E. University Ave. Dept. 3354, Laramie, WY 82070.
Thursday, April 16, 2015
48th Annual AGNR Alumni Celebration at the Samuel Riggs IV Alumni Center on campus. Join alumni, faculty, students and friends of AGNR in celebrating the class new alumni and recognizing the accomplishments of AGNR alumni and faculty. December 2014 and May 2015 graduates are free, but need to register. Ticket and additional information: 301-405-2434 or gyeiser@umd.edu

Saturday April 25, 2015
Maryland Day/AG Day The 13th Annual EggCiting Start to AG Day Breakfast in collaboration with the Maryland Egg Council, Inc., will celebrate scholarship donors and honor past AGNR student council leadership and Campus Farm employees. Free. Registration required 301-405-2434 or gyeiser@umd.edu
Maryland Day/AG Day information can be found on our home page http://agnr.umd.edu/ and www.umd.edu as the spring rolls along.

August 28-September 7, 2015
Maryland State Fair Join AGNR at the Maryland State Fair during the 11 Best Days of Summer!! The U-Learn Farm area next to the dairy cattle exhibit provides hands-on learning activities for children of all ages! AGNR students will be working with animals in the Birthing Center, also located in the Cow Palace. And all across the fair, Maryland’s premier youth development program, 4-H, will be showcasing projects that members have completed through the year. AGNR also exhibits with colleagues from the Maryland Department of Agriculture in the Farm and Garden Building.

http://www.facebook.com/pages/University-of-Maryland-AGNR-Alumni-Chapter/115419941422