

GRADUATE AG RESEARCH SPOTLIGHT



Nicholas Lancaster

"In my research, I simply don't know what the heck I'll be doing each day. That's both compelling and challenging, and I find that it pushes the limits of my capabilities."

Nicholas Lancaster, M.S. student, Animal Sciences

THE STUDENT: Nick Lancaster says he spent his youth "inside the city limits" of Greencastle, Indiana, even attending the one high school in his county that didn't offer an FFA program. But after Lancaster's affinity for science and love of animals led him to Purdue Agriculture, it took less than a week for him to realize that agriculture encompassed much more than farming: "It was something I could make a career out of—helping people by utilizing science." Lancaster appreciated diverse opportunities to study zebrafish, pigs, and dairy nutrition as he worked toward his undergraduate degree in Animal Sciences in May 2014. "I really enjoyed the research aspects," he says. Now he is working on a master's degree in ruminant nutrition under the supervision of Associate Professor Jon Schoonmaker. While further study in veterinary science remains an option, Lancaster also is considering combining science and business by adding a doctoral degree in agricultural economics. This would enable him to work with scientists as well as executives, for example, to determine what products a business should develop. "I want to be able to talk both ends of it," he explains.

THE RESEARCH: Lancaster's research in beef nutrition focuses on finding ways to improve the utilization of lower-quality feeds. "I'm working with compounds that make claims such as fiber degradation or helping control pH in the digestive system of the animal, which affects nutrient

breakdown," he explains. "I describe some of these compounds as 'Pepto-Bismol for cattle.'"

PATHMAKER AWARD: Lancaster has hired undergraduates to work with him and has hosted visiting scholars from Taiwan and Brazil. He also is a teaching assistant for a class in reproductive physiology, well outside of his primary research area. "I'm a nutritionist on a daily basis," he says. "But [being a TA] helps me review material from a class I took two or three years ago, recall information rapidly, and answer questions. It really helped me learn to explain things better." His nomination for the Pathmaker Award, which recognizes graduate students who have distinguished themselves as effective mentors and peer coaches, cited his "willingness to guide and mentor both fellow graduate students and undergraduate students, his determination to help others by solving issues and answering questions, and his honest methods for explaining solutions." Receiving the award, Lancaster says, "affirms where I should be going in my career—working with people."

FUTURE PLANS: Lancaster has to write four papers for publication as well as his thesis before he completes his degree, likely in May or August of 2017. In the little spare time afforded by such a schedule, he enjoys hunting and fishing. The former recalls a family tradition of weekends spent with his father, grandfather, brother, and uncles at the start of each new hunting season.