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Public research for private interests

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Agricultural colleges in the top five beef-producing states have become quasi-arms of the cattle industry, selling science to corporate bidders who set the research agenda with their dollars.

In the 150 years since they were created by President Abraham Lincoln as the “peoples’ universities,” public colleges in Texas, Kansas, Nebraska, Iowa and Colorado are now often focused on work for the big corporations and commodity groups that make up the industrialized beef industry in the U.S.

Of the $71.2 million spent on beef studies at these five colleges during the last five years, 30.5 percent was paid for by private corporations -- the majority by pharmaceutical companies and the National Beef Cattlemen’s Association, a review of public records shows. The $45.3 million in government spending was mostly aimed at the protection or promotion of industry interests like growing cattle into bovine behemoths or trying to reduce the risk of food poisoning coming from large feedlots.

Created to do research, teaching and service for the common people who first populated the prairie states, the colleges have become de facto research and development labs for big business, offering naming rights for buildings and professorships. Today, academics with taxpayer-funded salaries aren’t busy with the “blue-sky” research of pure science, but instead are studying questions that typically benefit large agri-business.

This dramatic shift is the “ultimate irony,” said **David Domina**, an Omaha, Neb., attorney who won a $1.28 billion antitrust verdict against Tyson Foods Inc. and has studied the industry for years.

“The research institutions are controlled by the nemesis of family farmers,” Domina said. “The nemesis of the family farm is the big business that is unwilling to tolerate what it perceives as the inefficiency of individual small operators.”

An investigation by Harvest Public Media revealed:

- In the top beef-producing state, Texas A & M University brought in $19 million in public and private money during the last five years, using it on studies of fattening cattle with grain, tracing contamination in carcasses and meat merchandising strategies.
- Kansas State University, which took in $4 million from pharmaceutical companies, hosts a training program created by the National Cattlemen's Beef Association whose largest success was teaching producers to change the injection sites for drugs in cattle from the rump to the neck so less meat would be damaged.
- In Nebraska, where cattle outnumber residents 4 to 1, university researchers and extension agents work under the slogan "Strengthening the state of beef," with a logo of a muscular bull flexing like a bovine bodybuilder. The state will be the leader of a team of researchers working under a $25 million grant from the U.S. Department of Agriculture to study E. coli, the bacteria to blame for a host of recent food poisoning outbreaks.
- At Iowa State University, where the first state ag college was founded in 1862, just 18.5 percent of the beef research budget is funded by the U.S. Department of Agriculture while half is paid for with corporate, commodity and beef industry money.
- At Colorado State University, JBS S.A., the world's largest meat producer, donated $498,344 for a professorship in the name of its Five Rivers Cattle Feeding. In 2005, Five Rivers donated a feedyard to the college, a gift valued at $2.5 million.

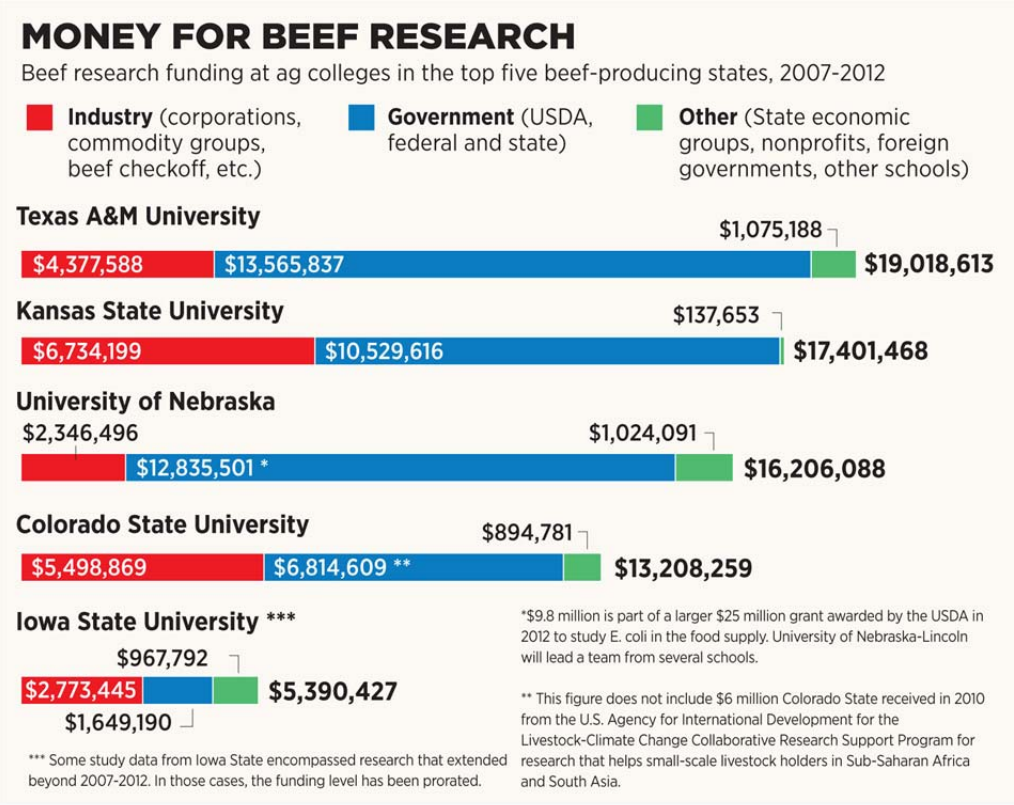
Agricultural college leaders are proud of these public-private collaborations, and not just in the beef arena, viewing them as the only way to combat the dwindling public funds while keeping research intact. **According to the USDA**, the private sector performed 53 percent of total food and agricultural research in the U.S. in 2007, which is expected to be a long-term trend.

John Floros, dean of K-State's College of Agriculture, Research and Extension, echoed many academic leaders who say the research is essential to be able to feed the estimated nine billion people on the planet by 2050. Floros, among others, decries the lack of federal funding and promotes the "synergy" created when scientific research can be applied by private companies.

"It's very clear to me that we're not investing enough in creating a safe food system for future generations, not just for this country but for the world," he said. "If we lose our leadership in food and agriculture I think we're going to have some serious issues as a country."

While they are grateful for government funds, David Lunt, associate director of Texas A&M AgriLife Research, said land grant universities have a mission they must pursue and they are "not going to sit back and whine" about the continued cuts.

“It’s just common sense that you go fishing where the fish are,” Lunt said. “Most money for research and development is in the private sector in the United States. It’s not in the public sector at all.”



More than ‘Moo U’

Last summer, more than 600 leaders from public universities met in Washington to celebrate the **Morrill Land-grant Act of 1862**, the law that revolutionized education by offering it to the working man to benefit society as a whole. Among the dignitaries to the event, which offered entrance for $100, was keynote speaker Bill Gates, the Microsoft magnate.

“If the nation had charted a different course 150 years ago and education had continued to be reserved for the select few, is there any doubt we'd be less competitive today?” Gates said. “Instead, we decided to build something new and better— and we created universities that are the envy of the world.”

The land-grant universities — so called because the law granted public lands for schools in all 50 states — rose from practical courses offered at the "Moo U" to become the powerful public universities of today. The Extension Service, built to take the colleges' research into the rural areas to be put to practical use, has now evolved into the **National Institute of Food and Agriculture**.

The major shift in mission for the ag colleges began with a minor change in federal patent law in 1980.

The law, sponsored by Sens. Birch Bayh of Indiana and Bob Dole of Kansas, gave universities ownership of intellectual property, patents to the inventions created on their campuses which had previously been owned by the government. This "technology transfer" law has been lauded as a "golden goose" of innovation and credited with opening up academic research to solve real world problems like treatments for cancer patients, MRI body scans and super-powered seeds and livestock.

Just as the doors opened up for industry, federal funding for ag research began to decline, creating fierce competition among the large institutions. Administrators who fought to keep their faculties intact were forced to cut deals with large corporations, or as Robert Taylor, an Auburn University agricultural economics professor calls them, the "sugar daddies."

"That becomes an implicit corporate subsidy to research the questions the corporations want answered — giant ag business wants answered — which is not necessarily the questions that common people need answered," Taylor said.

Counting on the cash infusion from corporations is also a result of stagnant federal funding for ag research, as more government funds are spent on human health and medical studies. In the 2011 federal budget, agriculture received just 1.42 percent of research dollars, about $2 billion. That's far behind the tens of billions set aside for defense – which gets more than half of the budget, some $78 billion — or health, energy, NASA and science.

"The fact is, we have to get that (research) done and there will not be enough public resources with the kind of situation we have with the debt and deficit today to do this job as well as it

needs to be done," Clayton Yeutter, former U.S. Ag Secretary during the first Bush administration, said during a **recent forum** at the University of Nebraska. "So it's going to have to be done with private sector help."

Private interests

Here are some of the popular private funders found among the public records analyzed for this story:

- Pharmacuetical, or "animal health," companies were the largest private investors in ag college research, making up 38 percent of the industry monies, comprising $8.5 million. Companies like Pfizer, Merck and Bayer spent money on how their products might affect respiratory problems in feeder cattle, increasing weights, or salmonella patterns in feedlot cattle.
- Pfizer, Inc., the pharmaceutical giant, paid $4.3 million for studies on E. coli and genetics. Just at K-State, $860,998 was spent on Pfizer's Epitopix, a promising new E.coli drug, while $303,887 went to K-State for the study of Synovex C, an implant of steroid hormones that makes calves gain weight faster, and is sold under Pfizer's Fort Dodge Animal Health label.
- The National Beef Cattlemen's Association, the main lobbying group for the beef industry, made up another 34 percent of industry donations, spending $7.6 million on tenderness and flavor studies, looking at the risk of E.coli and salmonella in marinated products, and "merchandising strategies for heavy-weight beef subprimals." The NBCA is funded by memberships, monies assessed on cattle producers, and donations from allied industry.
- K-State's **Beef Cattle Institute** is the national headquarters for the National Beef Cattlemen's Association training program. After an intial $490,000 grant from the school in 2007, the institute has operated since then on $200,800 donated by five pharmacuetical companies. K-State officials confirmed the donation figure but couldn't confirm the private donors, although they are listed on the Beef Cattle Institute's website.
- Archer Daniels Midland, the world's largest grain processor, spent $813,866 on studies about feeding distiller's grain, a corn byproduct, and on Optaflexx, sold by ADM subsideary Elanco, a growth-performance drug that boosts weights in steers.
- Cargill, which was forced to recall 29,000 pounds of beef last summer after a salmonella outbreak, has promised $500,000 to K-State for the Cargill Center for Feed Safety Research. The company, one of the top four beef producers in the U.S., also recently gifted $1.2 million to K-State for recruitment of minority students.

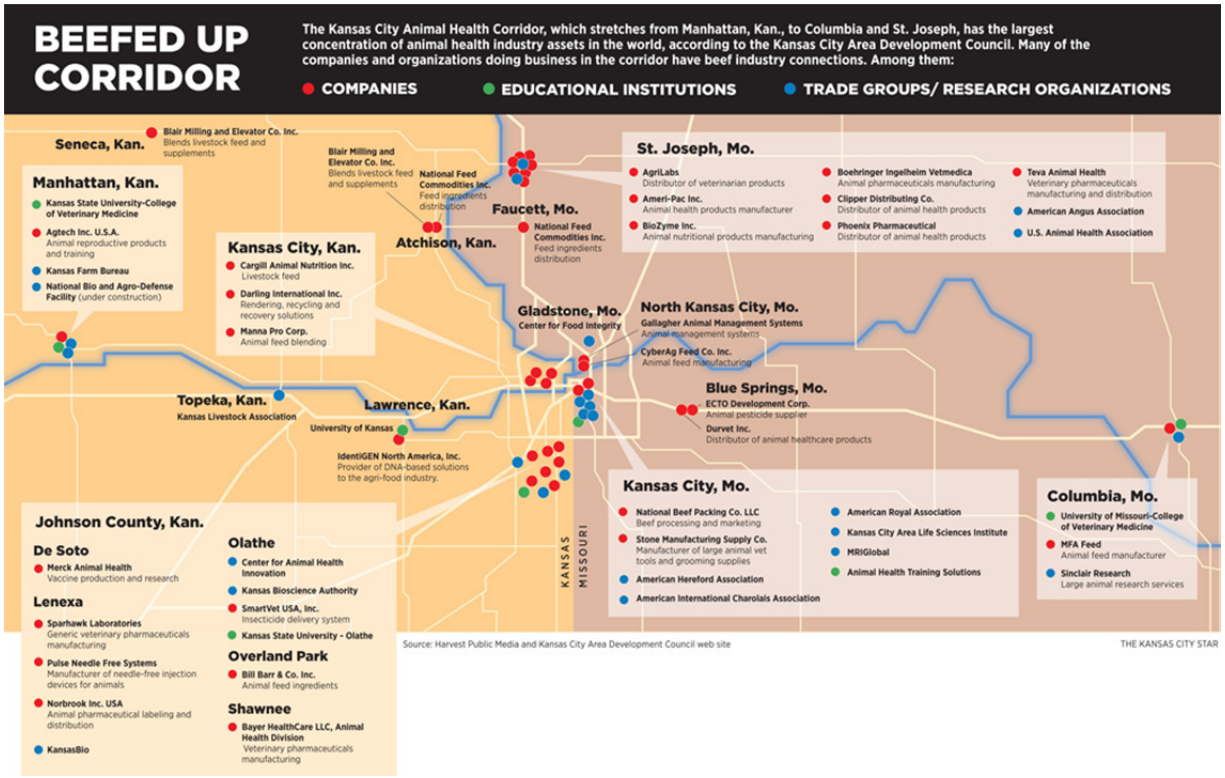
Mike Miller, NBCA's senior vice president for global marketing and research, said the group's research priorities are food safety, the role of beef in a healthy diet, and finding new cuts or "fabrication methods." Three new types of beef were the result of research, Miller says, including the popular flat-iron steak.

“What that allows us to do is to go back and talk to processors and packers and retailers and food service operators around the country about how they might utilize these new items,” he said. “And what it means for our industry is that in some cases it may be the difference of beef being on the plate or beef being off the plate.”

A Pfizer spokeswoman said the company could not comment on its research alliances because it is in a mandated “quiet period” before a proposed public offering.

Tracking the funds can be difficult, as some donations are funneled through the universities’ private foundations or alumni associations, which are private entities, and are not subject to public records requests. Other funds are placed into projects that cross into other disciplines.

For instance, the **O.H. Cruse Feed Technology Innovation Center** at K-State was funded by a $2 million gift from the family who owns the California feed and milling company. The other donors include: Cargill, Inc., the giant food processing company; CHS, a Fortune 100 agribusiness company; and Novus International Inc., which produces pharmaceuticals for livestock. K-State couldn’t release how much the other donors gave, citing confidentiality reasons.



Favoritism and the funder effect

There is no data to suggest that corporate-funded studies favor business interests. However, a cursory look at several studies shows, as beef industry critic **David Domina** said, “pre-ordained results are justified by research intended to be written backwards from the conclusion instead of forward to it.”

A case in point is a study done by K-State on a controversial drug called Zilmax. Marketed by Intervet, a subsidiary of Merck, the global pharmaceutical company, the drug dramatically increases weights in cattle before slaughter. **Zilmax has received some bad press** recently and one large packer, Cargill, refuses to buy cattle that have been fed the drug, citing a loss of meat tenderness.

The **K-State study**, published in 2011 and funded at least in part by Intervet, reached a much different conclusion. Cattle feeders could get an extra $21 a head using Zilmax, the study said, and beef packers could realize an extra $31 a head in “increased red meat yields.” The ultimate beneficiaries, the study said, are the smaller producers and consumers.

Merck/Intervet spent $129,728 on two studies on zilpaterol, the drug’s generic name, at K-State in 2007 and 2008. The Merck Co. Foundation also funded veterinary research grants and scholars programs in 2007, 2008 and 2009, totaling $108,457.

Although there is no reference to this Zilmax study in K-State’s grants database — or in public records requested by Harvest Public Media — the study’s writers acknowledged “funding assistance from Intervet/Schering-Plough.” A request to the principal investigator seeking the Intervet/Schering-Plough’s expenses went unreturned.

Merck Animal Health defended their studies and said research has demonstrated consumer satisfaction with meat from Zilmax-fed cattle.

The company has conducted 35 studies in support of the product, including one at Texas Tech University that resulted in consumers reporting they enjoyed the “flavor, juiciness and tenderness of beef steaks” from animals fed Zilmax” compared to those animals who had not been fed the drug, said Kelly Goss, Merck’s director of regional communications.

“We believe that providing support through grants or donations to third-party veterinary organizations is an important way to advance our mutual objectives to improve health and advance animal care,” Goss said.

Critics of the state of beef research at land grant universities are quick to point out that they don’t question the integrity of individual professors. These scientists are forced to go after the money so they can do the important work they love and support the graduate students they are teaching, said Leland Glenna, a Penn State associate professor of rural sociology.

Dig deeper

Forgetting family farms?

(Chuck Hassebrook/Facebook)

Public universities have a responsibility to serve their constituencies, and should be looking at technology and research that would keep family farms intact, according to Chuck Hassebrook, a member of the University of Nebraska Board of Regents and executive director of the Center for Rural Affairs in Lyons, Neb.

In an interview, Hassebrook told Harvest reporter Peggy Lowe that he believes our land grant system has "lost its sense of a social mission," in part thanks to the infusion of big business funding at agriculture universities.

“The key question is: Are we building the kind of economy that serves our people, that creates genuine opportunity for ordinary people and the future of their communities? And if the research does that, then doing it in conjunction with industry is probably a good thing because it makes it more effective,” he said “But we’ve failed to ask that question and that’s the problem.”

Glenna, who has studied agricultural biotechnology at land grant universities, said the agribusiness leaders he interviewed fully support “blue sky” research aimed at pure science. These leaders want the universities to remain above reproach, Glenna said, and are ardent supporters of more federal funding for agriculture research.

“They want to be able to leverage universities to do some of their R and D. But they also recognize the value of science, in and of itself,” he said. “They want universities to train people who might come to work for them someday. They want those people to have broad scientific educations. They don’t want them to be technocrats.”

Glenna and others are concerned with the “funder effect,” how increasingly the research agendas at land grant universities are set by the large corporations who fund the studies. Research that would benefit small operators, organic farmers or sustainable agriculture are “orphan issues,” said Patty Lovera of Food & Water Watch, an environmental watchdog group in Washington D.C.

“Are you going to look at questions that might make you critical of the dominant industrialized agriculture system if that’s where the funding comes from? Or are you going to structure it more narrowly and solve a problem they have?” Lovera said.

“So you can get funding as a researcher to deal with E-coli in cattle with a vaccine or a drug. Are you really going to fund a study that says maybe we should feed them on grass instead of corn?”

Asked about the “funder effect,” Archie Clutter, dean of the University of Nebraska’s Agricultural Research Division, said he believes schools should have a well-rounded portfolio of research that fits the needs of the university, faculty, and private-sector partners.

Clutter, whose previous job was at agribusiness giant Monsanto, said research into large-scale farming and, to a lesser extent, local production, will be needed to face the global challenges of providing nutrition to the world.

“I’ve come at these partnerships from both directions, from the private sector and now in this role,” Clutter said. “I know that a lot of what drives those projects and partnerships is the need for trained and talented people to work in agricultural production.”

These public-private relationships are also growing more competitive. Land grant leaders gathered at the Missouri Governor’s Ag Conference in Kansas City last January said they must increase the infusion of private funds to continue doing critical research, even while giving

financial incentives to the best professors who can share the rewards of patents and other industry innovations.

Wendy Wintersteen, dean of the College of Agriculture and Life Sciences at Iowa State University, vowed during the conference: “We’re going to be the easiest state for companies to work with.” She was unavailable for comment for this story.

Changing priorities

Even as some call for more public spending on ag research, others recommend a change in research priorities.

A 2002 National Academy of Sciences report recommended that goals at the public colleges must be broadened beyond productivity and efficiency — made more “scale neutral” — and should become more diverse to include “part-time farmers, small-scale farmers, organic farmers and value-added producers.” Technology information offered by extension “should serve a variety of producers,” including smaller scale, organic providers and other underserved and minority communities, the report said.

Last summer, Dan Glickman, U.S. Ag Secretary during the Clinton administration, and Jim Moseley, a deputy Ag Secretary during the Bush years, cited the 150th anniversary of the Morrill Act as the perfect time to change the Farm Bill to reprioritize current research dollars.

“Agriculture research just doesn’t have the priority of the United States government like these other areas,” Glickman said. “Somehow we’ve got to develop a regime, a strategic plan so the public and the world understand that feeding the world and doing it in a sustainable way is as important as any other research that we’re doing.”

If the private funding of public research continues, as expected, there should be much more transparency from the schools and the funding of each study should be cited in the many press releases promoting the collaborations, Food & Water Watch’s Lovera said.

“If a company paid for that research, we need to say so,” she said, “and stop pretending that this is the same old land grant (system) it was a long time ago.”

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