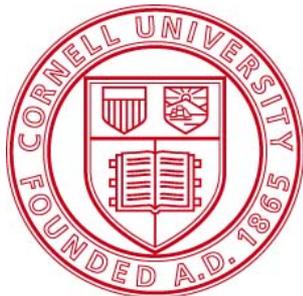


Colleges of Agriculture in the Land Grant (and other?) Universities: Capacity, Programs, and Future Interests Relevant to the Dairy Sector



Andrew M. Novakovic, PhD

The E.V. Baker Professor of Agricultural Economics

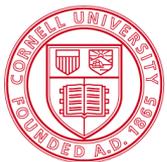
October 2012

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My Story – Lessons from Teaching, Research, Extension, and Administration at an LGU (It's not just a dairy story)

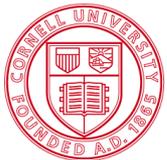
- 10 years as an administrator during a period when my unit morphed from being a Dept of Ag Econ to the Dyson School
- Teaching agricultural economics to students of the College of Agriculture and Life Sciences and (general) business students in the Dyson School of AEM
- Applied Research and Extension in both the context of the NY and NE dairy sector and national dairy policy and market analysis
- Over 20 years as a Congressionally Funded Center for Dairy Markets and Policy



Challenges and Opportunities Facing LGUs - Students

- Declining numbers of students from farms or related sectors
- Fewer or less appealing job opportunities in traditional agriculture
- Waning interest in academic majors about agriculture or food science, unless it is a focus on sustainability, small animals, slow foods, or the like
- Waxing student interest in majors that most directly lead to jobs

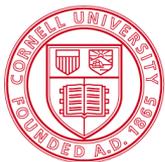
Yes, it's not identical everywhere. Don't put a lot of faith in the FAEIS data



Hot Job Types in the 21st Century – hot majors

- Teaching, various levels
- Health careers
- Business
 1. Accounting/auditing
 2. Marketing analyst
 3. Human resources
- Computer Related
 1. Technology - software and hardware
 2. Information management and processing

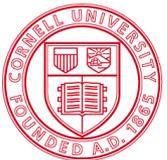
All of these opportunities exist in agriculture, but it begs the question whether the astute and ambitious student should major in agriculture or one of these more disciplinary fields.



Top 10 College Majors

1. Business Administration and Management
2. Psychology
3. Nursing
4. Biology, Biological or Life Sciences
5. Education
6. English Language and Literature
7. Economics
8. Communications Studies, Speech Communication and Rhetoric
9. Political Science and Government
10. Computer and Information Sciences

About as many students major in a foreign language as do in agriculture and natural resources



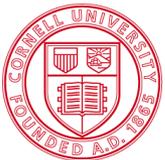
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Challenges and Opportunities Facing LGUs - Stakeholders

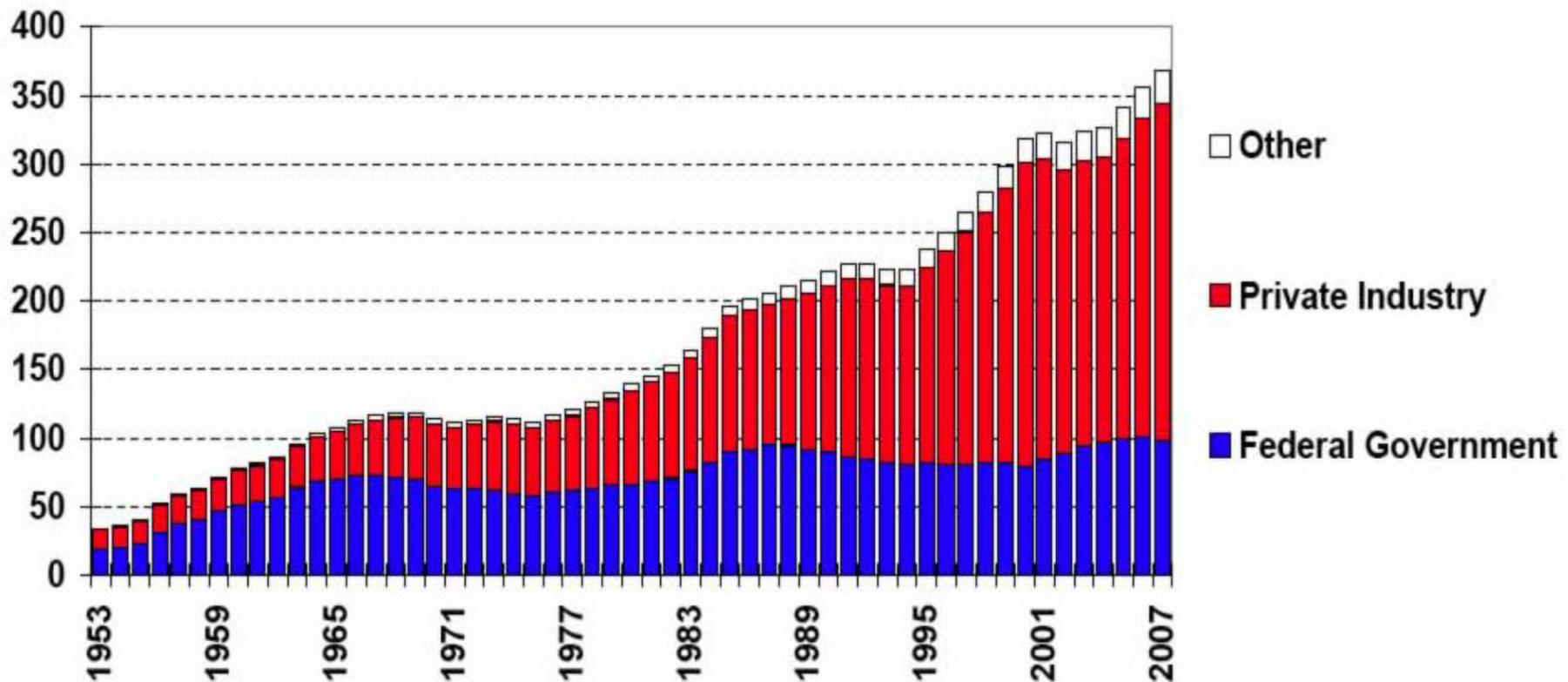
- Waning public support for special educational programs for agricultural and food businesses
- Waning public funding for agricultural and food research
- Waxing public and private support for (cf. jobs):
 1. Life sciences and medicine
 2. Environment and natural resource stewardship
 3. Computer and information sciences

Clearly there are regional variations based on priorities established by state government and local employers, but I think it is fair to say that all states have experienced these trends.



Private Funding is Far Larger than Public (i.e., it's for "me" not for "us")

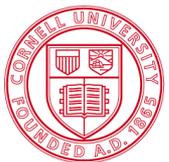
U.S. R&D Funding by Source, 1953-2007
expenditures in billions of constant 2007 dollars



Challenges to Agriculture and Food in a Teaching Mission and Strategy

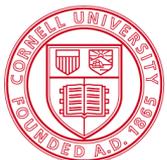
- Need for new, good employees just as important as any industry
- Number of jobs is not large, but there is “excess demand” for the best candidates
- More on-the-job training for graduates of general degree programs
- Opportunity to “top up” general degree programs
- Need for industry internships, ways to get students familiar with your industry

How do we match students with employers?



Challenges to Agriculture and Food in a Research & Extension Mission and Strategy

- Use of consultants instead of extension, or simply use highly skilled, professional employees.
- Reliance on equipment and service vendors
- Internalize research and educational needs?
 - Firm level
 - Trade associations
 - “cooperative” organizations (e.g., NDB)
- Just another business - adapt general tools as available
- Young/new consultants, managerial and technical employees, legislative and government staff don't know us
- Two-way learning is a hallmark of Extension, less so in Teaching.



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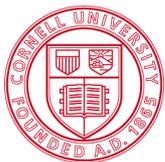
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Models for Dairy and Livestock Programs – Extension Plus

“farmdoc” (U. of IL)

- *Web-based information systems created by agricultural economists at the Univ. of IL, with initial funding from the IL Council on Food and Agricultural Research in 1998.*
- **Purpose-** *offer comprehensive and research based information and tools for farm decision-makers, focusing on the types of farms especially important to Illinois*
- **Organization** – *A team approach with team leaders and team members drawn from members of the faculty and staff of ACE at IL but also with contributions for agricultural policy, marketing and management specialists at Purdue and Ohio State University. A project manager manages day-to-day operations. There is an industry advisory committee.*
- **Distribution** - *Push email provides daily article to subscribers. Website contains data, reports and decision tools. About 1 million visitors.*

KSU Farm Manager and somewhat similar sites elsewhere but none with equal national profile. Little or no livestock or dairy content



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Models for Dairy and Livestock Programs – Government Funded

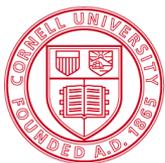
Food and Agricultural Policy Research Institute (MO) or Agricultural and Food Policy Center (TXAM)

FAPRI-MO - *encourages effective ag policy through the development and operation of comprehensive analytical systems. Primary activities include a market baseline for policy analysis and future planning purposes, policy analysis, market analysis, farm impact analysis*

AFPC - *conducts analyses of the impacts of government policy proposals and/or implementation procedures on farmers, agribusiness's, taxpayers, and consumers. Its primary constituency is the U.S. Congress, particularly the Agriculture Committees. The AFPC also conducts research and/or educational programs for government agencies, farm and agribusiness organizations, and agricultural leadership throughout Texas and the nation.*

Funding – Congressional grants were fundamental in establishing both, but have essentially come to an end, other grant funding for specific projects, limited core funding for faculty leaders.

Special Grant funding may or may not be permanently ended, but recent disruptions have put these programs in jeopardy and reveal vulnerability to a lack of reliable core funding.



Models for Dairy and Livestock Programs – Checkoff Model

National Dairy Promotion and Research Board or MilkPEP or Marketing/Promotion/Research Order

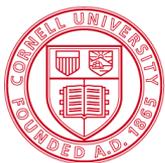
NDB – established in 1984. Uses national producer checkoff of 15¢/cwt to support promotion and research activities whose direct purpose is to increase the demand for milk and milk products

MilkPEP – established in 1990. Uses national processor checkoff of 20¢/cwt of Class I milk to support promotion of beverage milk products.

Orders – authorized under Agricultural Marketing Agreement Act. Not used for dairy but is used for certain specialty crops. More flexible than NDB.

Funding – NDB by assessments on producer milk checks, divided between NDB and regional, “qualified” alternative organizations. MilkPEP by assessment on Class I milk sales

Industry money but mandatory by government fiat; hence, usage is regulate by legislation

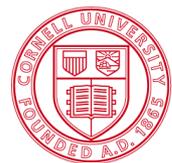


Models for Dairy and Livestock Programs – Partnership Model

LMIC – the Livestock Market Information Center.

- **Purpose** - *provides economic analysis and market projections concerning the livestock industry, since 1955.*
- **Members** - *cooperative effort between state university extension specialists, USDA economists, industry cooperators and Center staff.*
 - *11 associate members represent the American Farm Bureau Federation, American Sheep Industry Association, Canadian Wheat Board, CME-Group, CoBank, Consortium of Canadian Extension (Agriculture departments of Alberta, Manitoba and Saskatchewan; University of Manitoba), National Cattlemen’s Beef Association, National Pork Board, Noble Foundation Agricultural Division, the Texas Cattle Feeders Association, and Texas Christian University.*
- **Center Funding** - *All members of the Center (state Land Grant Universities, USDA agencies and Associate members) contribute annually to baseline funding. That baseline funding provides for staff salaries, etc. Non-members pay subscriptions and user fees for materials and services. Special projects beyond normal Center programs are supported by funded cooperative agreements, etc., with member organizations.*
- **Distribution** – *most data available by paid subscription*

Primarily data synthesizers and vendors



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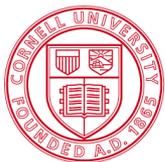


Models for Dairy and Livestock Programs – a Not-for-Profit Catalyst Organization

Center for Dairy Excellence (PA) or NY Farm Viability Institute

- **PA Center for Dairy Excellence**, a non-profit 501C6 organization created in 2004, was created to enhance profitability and viability of the PA dairy industry by empowering people, creating partnerships, and increasing the availability and use of resources.
- **The NY Farm Viability Institute**, a farmer-led nonprofit group, awards grant funds for applied research and outreach education projects that help farms increase profits and provide models for other farms. Source of funds is State of NY.

Industry led. State government funding is important. Purpose is broad and flexible. Direction is not always clear. May or may not help LGUs



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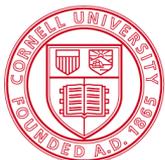
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Models for Dairy and Livestock Programs – Extension Plus with Government Funding

Pro-Dairy (Cornell)

- **Purpose:** Created as a multi-disciplinary effort focused on improving the skills, planning, and execution of NY dairy farm managers – “we know what to do, we just need to do it, or do it more reliably
- **Organization:** run as a special project within Cornell Coop Ext, involving a network of on and off campus academic staff
- **Funding:** NYS grant funds specialists and some extension educators

Success has been determined in large part by the quality and dedication of the staff. Extra funding has increased capacity – but also displaced core support



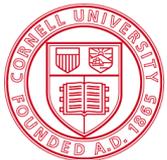
Lessons from What We Have Done?

Partnership models depend on shared sense of mission and willingness to cede control and credit – easier to do with more mundane projects and/or outputs of very broad interest (e.g., market news)

Barter models (you can use our corn person and we'll use your livestock person) only works when you have something to trade

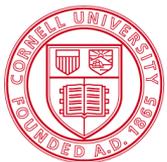
Government funding tends to be annual and uncertain – negative implications for multi-year planning and hiring.

Intersection of University supply and Industry (or government) demand is often disappointing to both



New Models for Supporting Academic Programs Relevant to the Dairy and Livestock Sectors.

- Unlike a revolving door of students, industry focused programs imply a long-term partnership that stresses what industry and industry members need and the comparative advantages LGUs can deliver.
- Both partners need to truly understand and appreciate each others needs and capabilities.
- Implications?
 - Specialized teaching programs to train future employees
 - Continuing education for current employees
 - Problem-solving for business and operations management, and government agencies

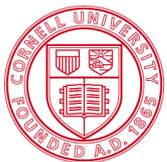


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New Models for Supporting Educational Programs Relevant to the Dairy and Livestock Sectors.

- Teaching
 - Partnerships with traditional disciplinary studies in the physical, biological and social sciences
 - Emphasis on:
 - Subject matter knowledge that builds on disciplinary knowledge studied elsewhere
 - Experiential learning, including
 - Guest speakers
 - Guest seminars
 - “Fellows” programs
 - Internships
 - Career development
 - Formal but targeted continuing education programs

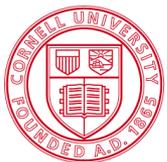


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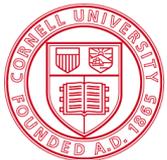
New Models for Supporting Applied Research and Extension Programs Relevant to the Dairy and Livestock Sectors.

- What is our purpose and role? Where is our comparative advantage?
 - Disseminating information
 - Synthesizing and interpreting data
 - Comprehensive and timely research that focuses on problems of current significance to the industry
 - Sophisticated research that offers promise for the future
- Whom should we expect to support each of these activities?
- What organizational and business structures will best capture and utilize resources to support each?



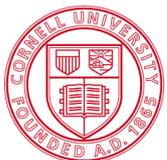
The LGU/Industry Sweet Spot – Comprehensive, timely research that focuses on problems of current significance to the industry and extending those solutions while grasping new problems

- What LGUs used to be about? Alignment of faculty interests with industry/government needs is crucial.
 - Is working for/with you 1) a philanthropic gift, 2) something I will do for pay, or 3) part of my job.
- This space occupies a funding gap that falls between core LGU funding, competitive grant funding, and industry funding that seeks exclusive benefit
- Possible business model should follow the cooperative logic of existing LGU funding but with different partners:
 - Core commitment by LGU for key faculty and staff
 - Ongoing commitment by industry for minimal professional staff to support administration, communication, and core projects.
 - Project funding
 - State funding? Part of LGU core or directed to a “Center”



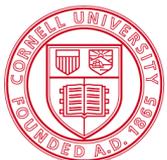
Key Elements of a Business and Operating Model

- The LGU must make a long-term commitment with key faculty that provide core knowledge and their own commitment
 - Administrative and other support staff should follow key faculty in whatever manner is standard for the LGU
 - Grad student, technical and post-doc support similarly
- Industry must contribute to the core, not just special projects
 - Key faculty (and staff) will not be enough capacity
 - University core funding will not be sufficient or well-oriented towards industry needs
- Projects should be identified that are:
 - Core – ongoing and deserving of core support
 - Special – responding to discrete, identified needs and obtaining special funding, in the typical manner of projects and grants

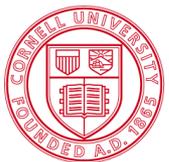
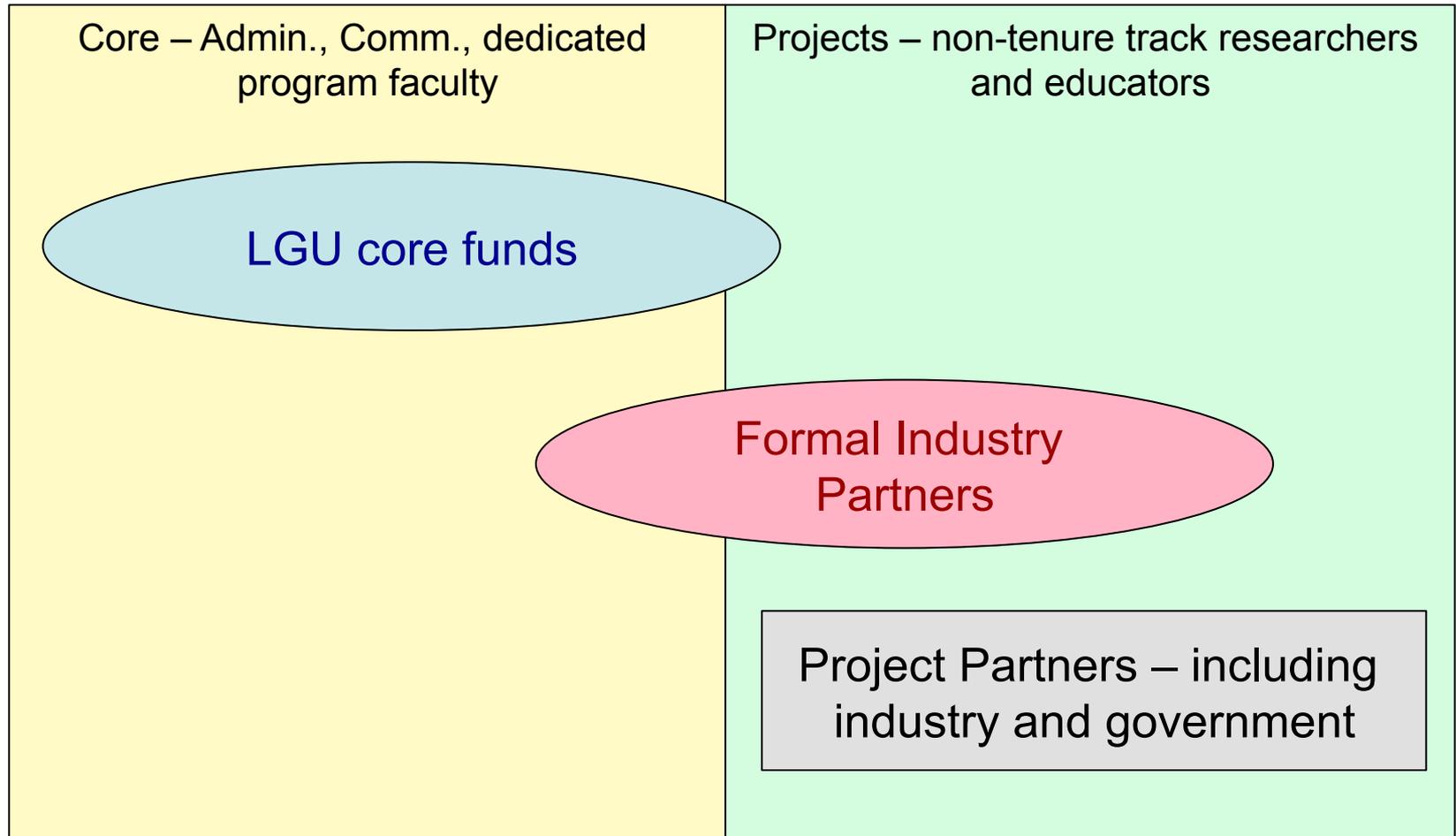


Key Elements of a Business and Operating Model

- “stakeholders” must articulate what it is that they want and expect from their LGU or the LGU system and then actively work with the LGUs to see what they can jointly accomplish.
- each LGU must gauge how well or to what extent its “supply” meets the “demand”. At the same time, stakeholders must seriously examine how much their “demand” is relative to the price they are willing to pay.

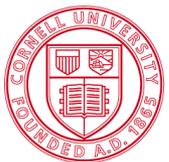


A Suggested Funding Design



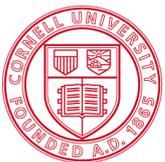
Key Elements of an Organizational Model

- It is time, it is necessary, to look beyond the 19th Century model of organizing research and educational programs around state boundaries
- Teaching programs aren't limited to states
- Research isn't. Even Extension is pulled outside of state boundaries
- Agribusinesses and the food industry is rarely limited to State boundaries
- In our cyber-world, even farms are no longer limited to local vendors.

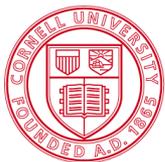
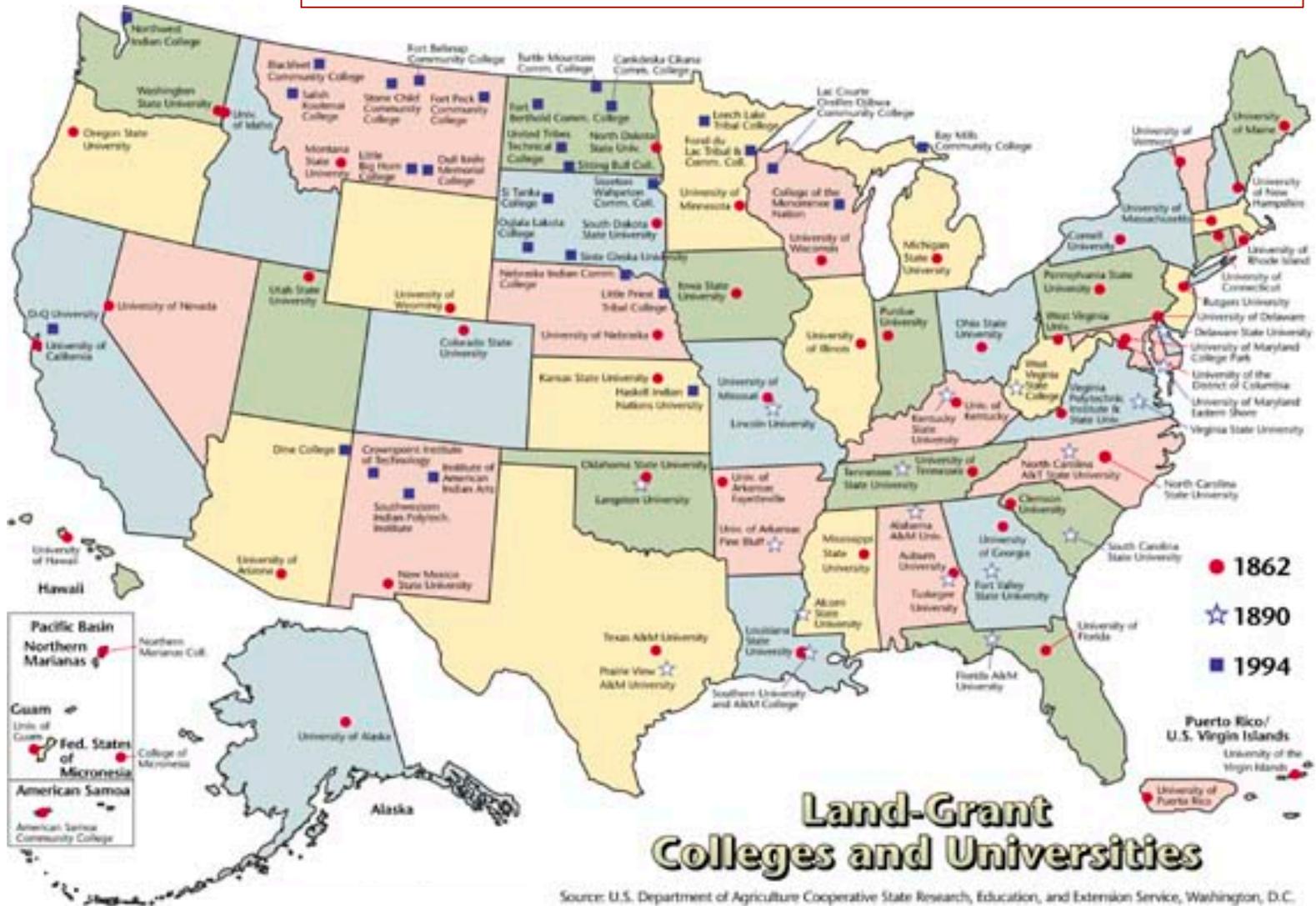


Key Elements of an Organizational Model

- It no longer makes sense for every LGU to have capacity in all industries and areas that are represented or even important in their states
- Models of cooperative sharing among LGUs in a region have also outlived their usefulness for commodity-based work
- How many Universities are really needed to focus on agriculture, much less livestock and dairy? (The ~150 that exist now? One per state? Or, far fewer?)

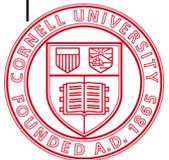
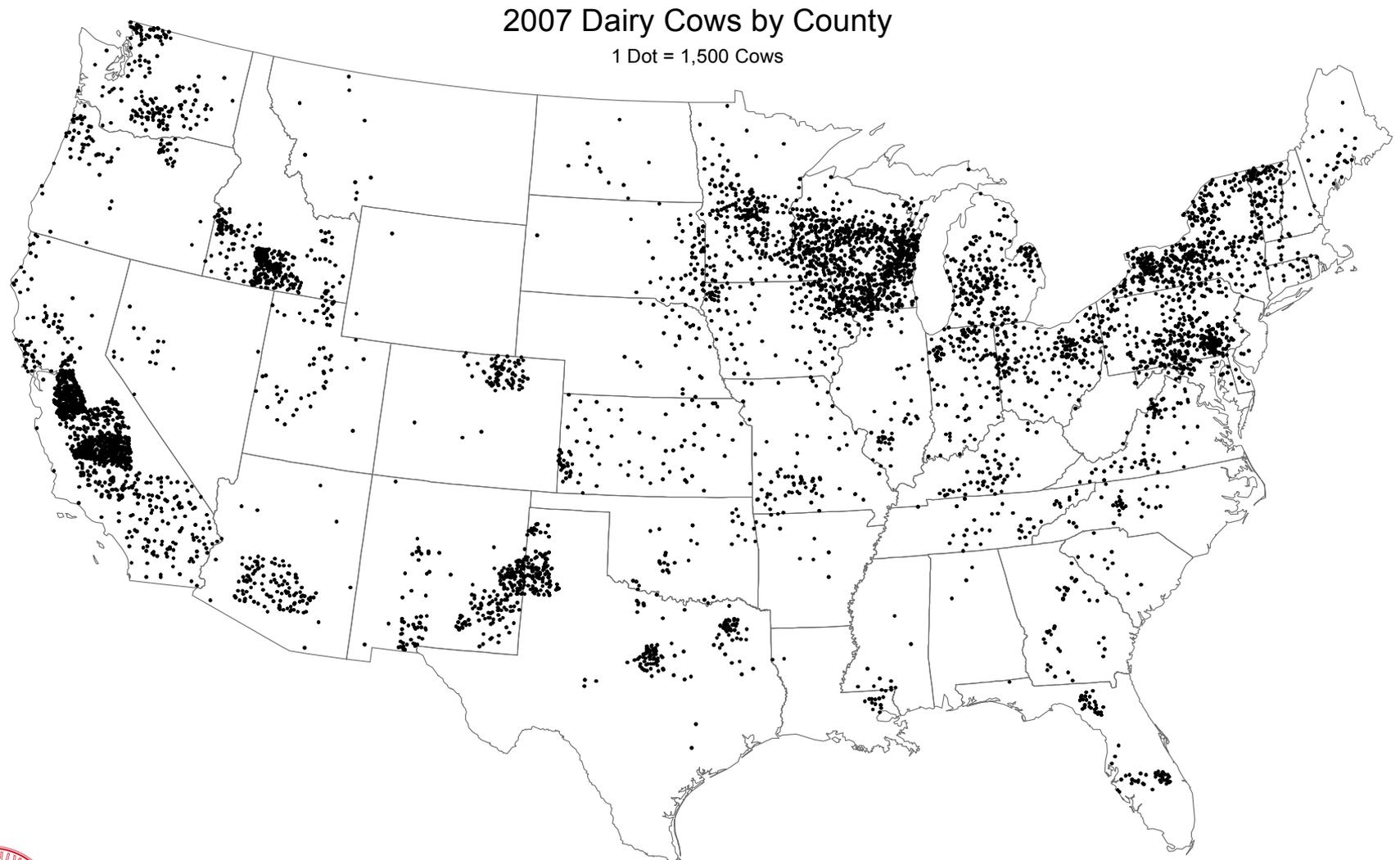


There are over 150 “schools of agriculture” in the U.S.



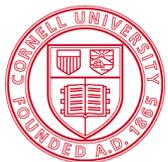
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How Many Are Needed to Cover, Say, Dairy TRE?



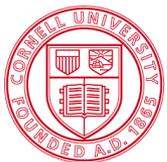
My Recommendation to Industry Leaders

- IFF you believe that University resources and the specialized knowledge of highly trained faculty continue to be important to the current and future vitality of your industry
 - You need to act while there is still something to preserve
 - You need to move beyond school and regional loyalties and focus your attention and resources where the expected long term payoff is best
 - You need to think of this as a business relationship, not a lobbying effort or an entitlement
 - Question: how many eggs? How many baskets?



My Admonishment to LGU Leaders and Faculty

- Search your organizational soul - Is working with industry an obligation or an opportunity or a chore?
- Do you have the assets and resources for a 3 point attack?
- Are you prepared to make a long term commitment, with a similar assurance from industry and possibly government partners?
- LGUs must commit to a basic infrastructure, including dedicated faculty.
- Don't oversell what you are prepared to do.



Now What?

- Who makes the first step?
- LGUs must provide a rationale, vision and some concrete examples.
- Industry must respond with concrete expressions of
 - What they want
 - What they are prepared to offer for support
- LGU and Industry must work out organizational and governance details.

