29 Slides
- Name change for department
- Defined in State statute
- Undergrad teaching is smallest
- Public service & teaching largest
- 100 FTE employees
  - 2 FTE teaching
  - 67 FTE ADRDL
- Money:
  - 40% State
  - 60% generated
- 20-30 grad students
- Fully accredited since 1972
- 75% food animal cases
- Work with State Veterinarian
- High priority on disease prevention
- Revenue from vaccine development & test methods
- One Health: healthy people, animals & environment

Plan Highs & Lows
- Were making progress on Bio-Safety level 3
- West River Diagnostic & Research Center
- Downsized work force by 18%
- Extension & Research still strong
- Grad students still strong
- Still have desire to move into West River

Telemedicine Question
- Access – password
- Not been huge because still have practitioners
- But if move to regional center model like human health, could change
• Distance connections with companies
  o serving place-bound scientists
  o use for seminars
  o deliver at a distance
• Get cases from around the country
• Diagnostic work is good PR

Grad Program
• Do they want grad programs to grow?
• Want research program to grow
• Need space
• A good scientist is not a loss to the university and then they train grad students
• Not just space but resource limited – have lost TAs and RAs
• 18% loss of faculty translates into students
• Building – waiting for Pierre to be receptive. Idea was to combine State and Federal funds
• Federal forecast for funding looks gloomy

Undergrad Research
• 75-100 UG – lose 50%+ after first year
• Place 8 to 12 to 15 each year into Veterinary schools
• About half come back to South Dakota to work
• Biggest concern for veterinary medicine education is debt for both undergrad and grad then veterinarian income rate is lower than medicine
• They have been strong and active in undergrad research
  o Joseph Nelson program
  o Griffith & Bentley
• Engagement with Honors has changed. They are struggling to figure out how they fit in – particular with Honors emphasis on research
• Get 2-3 inquiries per week
• Need to promote this. A niche for SDSU
• Research, teaching, extension – package together and that becomes service and shows constituents what we have to offer

Intellectual Property of Student Researches
• New policy – students have to sign over their rights if participating in
  o Sponsored Research
  o Faculty-directed Research
• “Gratuitous Employees”
Future Hopes, Dreams and Aspirations
As come out of economic downturn need to grow – Research and Service
1. Need a building/space to keep at the level have been at since high containment and security has changed
2. Want to expand to West River – a branch in the Rapid City area
3. Past 15 years worked hard to reach critical mass of work force. Have slipped in the past few years. Also, need to “change the guard” with people retiring
4. Areas that are expanding need space, want teachers, researchers and extension workers co-located
5. Programmatically – look at niches and see if we can raise money in those areas for programs
6. Need upper administration to share the importance of the research that is being done. People take agriculture for granted.

- “One Health” – both people and animals, ties with Avera and Sanford – changed the name of department because of this
- Do the testing for Avian and Swine Influenzas which directly apply to humans
- They have reached out to USD but they haven’t responded
- Now Vet Science has to get money from USDA and NIH
- Maybe opportunities with Nursing too
- Harder to get money than from Medical School

Hoof-to-Plate Tracking after 9-11
- Monitoring and Surveillance
- Political hot potato at state level

Library
- Library as hot link
- Children of grad students in other places
- ILL is awesome. Response is great
- Would like a few extra virology journals
- Archives
  - Currently use SD Veterinary Association which is over 100 years old
  - Has offered them space
  - Have to keep records for 7 years, then destroy
Development Work With Older Veterinarians

- Have had some small gifts
- Graduate from Veterinarian school somewhere else so the links are more difficult with SDSU, just depends on relationships
- Animal health companies are a small wart on the bigger body of human health
- Novartis has been good to them for smaller stuff
- If society wants strong animal health centers, it will cost

Vision on Collaboration with Companies

- Corridor from South Dakota to Missouri will be strong and we’ll have the opportunity to work with these companies
- But agencies more apt to fund basic research – companies have more intellectual property and confidentiality hurdles
- We have raw material, they like samples

Investment in High Performance Capacity

- Is that a possibility for them?
- Most of their stuff is genetic comparisons so don’t need that level yet
The Strategic Plan for South Dakota State University’s Veterinary Science Department (VSD) 2008-2012

Executive Summary

Department Overview
The Veterinary Science Department (VSD) is a member of the SDSU College of Agriculture and Biological Sciences. The department works diligently to fulfill the tripartite mission of the land-grant university system: teaching, research and service. The department employees 24 faculty members and over 90 total employees; as well as dozens of part-time student employees.

The department is currently home to several distinct subunits:
- South Dakota Animal Disease Research and Diagnostic Laboratory
  - South Dakota’s only accredited animal health diagnostic laboratory
  - Member of the National Animal Health Laboratory Network
  - Member of the Food Emergency Response Network
- Olson Biochemistry Laboratory (SDSU’s Agricultural Experiment Station analytical services laboratory)
- 2010 Center for Infectious Disease Research and Vaccinology (CIDRV)
- SDSU Animal Resource Wing (lab animal & animal disease project facility)

The VSD is somewhat unique in that it operates two of the largest public service laboratories in the state, the SD Animal Disease Research and Diagnostic Laboratory (ADRDL) was established officially by SDC law in 1967 and the SDAES Analytical Services Laboratory (Olson Biochemistry Laboratory).

Our research and diagnostic program focuses heavily on food animal infectious diseases issues. With the establishment of the 2010 CIDRV, our research program has transitioned to now include important zoonotic diseases and basic science directed at controlling and understanding infectious diseases more precisely.

The VSD does not offer an undergraduate degree, but coordinates the Pre-Veterinary Medicine curriculum for the college. South Dakota residents that wish to pursue a DVM degree spend three to four years at SDSU and then usually apply to two veterinary colleges that the state has official relationships.

Our Veterinary Extension program provides vital continuing education opportunities for the state’s 400 veterinary practitioners and unbiased information for producers and animal owners. Our diagnosticians also make significant contributions to public outreach by spending considerable time discussing submitted cases and results with veterinarians and producers throughout the country.
**Department Mission and Vision**

- **Department Mission:** To protect and improve the health of animals, the viability of the SD agricultural industry, and the welfare of society through high quality diagnostic, analytical, research, extension and teaching activities.

- **Statement of Strategic Intent/Vision:** Our strategic intent is to achieve national distinction while strengthening local relevance as we strengthen our programs with excellence and become recognized as the leading Veterinary Science Department in the U.S. The VSD vision intent is to:
  - Develop leaders that will have productive careers in the fields of animal and human health
  - Provide our stakeholders with relevant, accurate and unbiased information and data that will help them enhance economic development and the quality of life in our region
  - Conduct scholarly work that has a major impact on animal and human health
  - Provide excellent, renowned professional service to the public through the ADRDL and OBL
  - We will invest in ourselves. We will advance our department’s human resource potential.

**Guiding Values**
Our guiding values are in line with the long-standing traditions of the land-grant university system. The following are modified and adapted from the SDSU College of Agriculture and Biological Sciences:

| Integrity, honesty and respect will be a foremost component in all activities at all times. | Diversity of people, cultures, and ideas will reflect a global perspective, enrich our lives, and enhance our program quality. |
| Professional service will be excellent, timely, useful and relevant. | Stewardship, both responsible and wise, will be practiced in the beneficial development and use of limited human, economic, and natural resources. |
| Graduates will be prepared for a lifetime of learning, career success, leadership development, and personal satisfaction. | Stakeholders will be engaged to identify priority issues and opportunities, develop synergistic partnerships, and to focus use of resources. |
| Research, scholarship, and creative activity will inform, teach, contribute to economic prosperity and/or quality of life, and be socially and environmentally responsible. |  |
Major Strategic Goals and Initiatives: 2008 - 2012

The VSD has numerous goals and objective for the next five years. However, the following are major strategic goals and initiatives that will require significant work to accomplish. The education of administrators and our stakeholders, and the formation of strategic partnerships will be required for success:

- ADRDL High Containment (BSL2 & BSL3) Addition
- Sustain and advance the CIDRV center of excellence as a spire of research distinction
  - With new tenure track faculty positions
  - Recruit an established RO1 research leader into the CIDRV by 2012
- Gain reaccreditation of the ADRDL in 2008 and advance our Quality System and service as a spire of departmental distinction
- Seek to develop a better model for determining appropriate salary levels for professional faculty and career service staff to recognize and reward outstanding efforts and leadership in fulfillment of our mission and vision
- Develop excellence and make significant contributions towards the five signature themes of the ABS College
  - Biorenewable economic development
  - Applied genome technology solutions
  - Natural resource stewardship
  - Community innovation and leadership
  - Enhancing the economic development of livestock/food systems
- Stretch Goals include the following:
  - Recruit an established RO1 research leader into the CIDRV by 2010
  - Add a West River Branch of the ADRDL
  - Seek central administrative support that will allow us to establish an AALAC certified campus-wide Animal Resource Wing
  - Add another DVM to the Veterinary Extension program
SDSU DVBS/ADRDL
2002 - Animal Resource Wing Disease Research Project Facility
SDSU Veterinary & Biomedical Sciences Department (VBSD)

- Home Department for the:
  - SD Animal Disease Research and Diagnostic Laboratory (ADRDL) – Dr. Zeman, Director
  - SDSU Olson Biochemistry Laboratory (AES Service Lab for the Agriculture Industry) – Dr. Zeman, Director (closed in 2011)
  - SDSU Animal Resource Building
  - Center for Infectious Disease Research and Vaccinology (CIDRV) – one of the States First 2010 Centers of Research Excellence – Directed by Professor David Francis
Activities

- Teaching
- General Service to Discipline, University, Community
- Research (Extramural and AES)
- Professional Outreach Service** Service Labs

Traditional land grant University roles
SDSU VBSD Stakeholders

- Students, faculty and staff
- All animal owners
- Livestock Producers
- Hometown DVM
- General Public
- South Dakota Economy - Animal Agriculture and Biomedical Research Industries
- Animal and Human Health Industries
VBSD Labor Force ~100 FTE Employees

- ADRDL - 67 FTE
- OBL - 15 FTE - closed
- Teaching - 2 FTE
- Extension - 1.2 FTE
- Research including CIDRV - 15 FTE (includes 20 GRAs @ .5 FTE each)
- 24 to 36 part time student workers
- 20 Faculty members, numerous CS staff, few NFE staff, many adjunct faculty
$8 - $10M Annually

- $2.0 M SD Budget Line Item for ADRDL
- $3.5 M ADRDL user fees
- $1M Olson Labs user fees (now lost)
- $2.0 - $3 M grants and contracts
- Academic Program funds
SD ADRDL Funding

- State Budget 40%
- User Fees 50%
- Grants and Contracts 10%
VBSD Teaching Program

- No undergraduate degree offered
- Pre-Veterinary Medicine Program
  - 75 – 100 freshman
- 20 to 30 graduate students
  - Infectious Disease Research
  - Molecular Biology
  - Pathobiology
Extension Veterinary Medicine

- Magnify our efforts via cooperation with the 400 veterinary practitioners in the South Dakota
Animal Disease Research and Diagnostic Laboratory (ADRDL)
The ADRDL remains one of the nation’s premier labs relative to infectious disease diagnostic & research work for livestock.

Member of:
- USDA NAHLN
- USDA/FDA FERN
- USDA/CDC Select Agent Registry
- FDA VLRN
Quality matters...fully accredited since 1972

- Accreditation Standard in compliance with international OIE expectations
- On site audits

ADRDL Quality System
Quality System Policy

SAY what you DO

DO what you SAY

&

PROVE it.
Current activities of the ADRDL

- 25,000 annual case submissions
- Over 400,000 annual test procedures
- 75% food animal case load
- State and regional lab
- Mentoring undergraduates and graduate students
Bacteriology
Modern BSL2 Lab
SD ADRDL Federal Government Interactions

- National Animal Health Laboratory Network (NAHLN)
- A voluntary state and federal (USDA) partnership to strategically address issues regarding animal health laboratories in the USA
Goal: Definitive Diagnosis

- Requirements for a Definitive Diagnosis:
  - Clearly define the *clinical complaint*
  - Identify *lesions* that explain the clinical complaint
  - Identify *etioologies* (often microbial pathogens) that explain the lesions
Goal: Healthy Animals, Healthy People, Food for People

- High % of workload is monitor and surveillance – disease prevention.
- High % of workload supports economic activity of the regions food animal production industries.
Our research focus:
- Food Animal Infectious Disease Research
- Vaccinology
- Diagnostic Test Method Development
- Discovering New Disease Syndromes with ADRDL Diagnosticians
Historic building where PRRS virus first isolated in North America, and the precise cause of the new “Mystery Pig Syndrome” was determined.
Well Fed Societies take Agriculture for granted.

Mylo Hellickson
Our Vision -

- One Health
  - Animals
  - People
  - Environment
- Feed the World
- Educate the next generation of Animal Health Scientists & DVMs