Chapter 17

Faculty Perceptions of Student Employment Selection and Career Commitment
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Introduction

The purpose of this study is to examine decision factors that influence student employment selection of a career in food animal medicine. This information will be useful for the development of strategies that can be implemented to recruit students into food animal veterinary medicine and make changes in the curriculum of Colleges or Schools of Veterinary Medicine. Data from this study are used to identify the key decision factors that students use when they make a career selection from the perspective of Deans and food animal faculty. In addition, several questions are analyzed that focus on retention factors and career benefits that influence employment commitment to food animal medicine.
Methodology

The Deans of the 32 Colleges or Schools of Veterinary Medicine in the USA and Canada were contacted by telephone and a follow-up email and told the purpose of the study and how it would be conducted. All 32 Deans agreed to participate in the study. The Deans either provided email lists of food animal faculty and administrators for their institution or agreed to distribute the questionnaires on their faculty and administrative listservs. Administrators and faculty were notified in advance of the study and the Deans endorsed the project and requested cooperation. The email lists of Deans and food animal faculty from 32 Colleges of Veterinary Medicine in Canada and the USA that were provided to the researchers were complied and duplicate emails were eliminated. This resulted in 439 unique email addresses.
Sample Design

Pretested questionnaires were sent out in three waves separated by one week increments to the 439 unique email addresses by the researchers or Deans. This generated 214 valid respondents. This resulted in a response rate of 49%. This group of 214 food animal faculty and Deans were asked what they thought influenced food animal veterinary students to select a particular employment area in veterinary medicine. The questionnaire was approved by the AAVMC and the FSVMC prior to administration.
Contact and Measurements

Cover letter / Survey / Constructs

Subjects were sent an email message from the research team that explained the purpose of the research, identified the sponsoring organizations, and invited them to participate in the study. A web URL was included in the email message that linked to the online survey. A variety of constructs were measured in this research instrument. Items asked about debt repayment, lifestyle issues, employment challenges, client relationships, opportunities, and critical career factors. Items also asked about what influences DVMs to make a career commitment to food animal medicine and to identify the major benefits to students selecting a food animal veterinarian career.

Survey items were developed based on insights from an extensive review of the veterinary career literature and general human resource/career selection literature as well as discussions with Deans and food animal faculty.
Non-response Bias

Statistical analyses were carried out for non-response bias. A wave analysis with the Student’s t-test was used to look for differences between early and late returns. This provides some information about whether the data from completed questionnaires are biased by the likelihood of non-response. The wave analysis method assumes that subjects who respond less readily are more like non-respondents. Using the t-test for two sample proportions and a 95 per cent level of confidence, it was found that there were no significant differences between early and late returns for items in the questionnaire at the 0.05 level. Since the study did not involve sensitive issues, it was concluded that there was no compelling reason to believe that the response group systematically possessed different response tendencies from non-responders.
Overall Findings

• Sixteen Deans, 19 Associate Deans, and seven Department Heads participated in this study. The remaining 172 questionnaires were completed by food animal faculty.

• The majority of Deans and food animal faculty believe the most important variables that influence the selection of a career in food supply medicine is coming from a rural area where a person had a lot of experience with herd/flock animals. People who select this area are seen as having a strong attraction to a rural lifestyle and production animal medicine. Food animal students are viewed as desiring to return to live and work in the country upon graduation from a College of Veterinary Medicine.

• Administrators and faculty think that students might change to a career in food animal medicine if they have a positive exposure to food animals very early in the curriculum and are assigned a positive faculty mentor that works closely with the student. Students avoid careers in food animal medicine because they have no exposure to the area and perceive the work to require long hours that would interfere with family life.
Overall Findings (continued)

• In response to open ended questions, Deans and faculty report that having a satisfying first job in a nurturing environment coupled with a good salary and benefits would have a positive influence on alumni to make a lifetime commitment to food animal medicine.

• Administrators and food animal faculty believe that Colleges of Veterinary Medicine can increase commitment to food animal careers by admitting more students with a rural background and providing mentors, externships, and scholarships to those interested in this occupational area.

• Deans and faculty believe that food animal careers provide many benefits to potential employees such as a high salary, intellectual challenges, the opportunity to work with friendly clientele, and a high quality rural lifestyle.
Overall Findings (continued)

• Administrators and faculty were asked a series of questions to identify variables that were important to students when selecting a particular employment area of veterinary medicine.

• Administrators and food animal faculty think that students are influenced by the following variables when selecting an employment area:

  • Repaying debts from veterinary college
  • Wanting a meaningful job
  • An intellectually challenging career such as in food animal medicine
  • The opportunity to fully utilize medical knowledge and the believe that this can happen in a food animal career
  • Having time to raise a family, take vacations, and control work hours
  • Having training in the first job and a mentor
  • Being able to protect the nation’s food supply and the opportunity to care for herds/flocks of animals
Administrators and food animal faculty were asked a series of questions about what a College of Veterinary Medicine could do to increase the supply of food animal veterinarians. The following responses were the most popular ideas regarding admission policies and scholarships:

- Reserve class slots and offer early admissions
- Provide substantial scholarships and a mentoring program
- Give a food animal career orientation session prior to the beginning of classes for first year students.
- Let students study and treat food animals in the first semester
- Do not use a gender admission process to select more males from the applicant pool
- Do not lower standards for food animal students based upon GPA and standardized test scores
Overall Findings (continued)

- Administrators and food animal faculty were asked a series of questions about what a College of Veterinary Medicine could do to increase the supply of food animal veterinarians. The following responses were the most popular ideas regarding post-graduate success and sharing resources:
  
  - Provide extra job placement services and encourage the use of veterinary technicians
  - Increase the clinical caseload of food animals and arrange paid externships
  - State funded legislation to forgive student loans for a commitment to work in the state
  - Create regional Centers of Excellence in Food Animal Medicine and Management
  - Have students rotate and share curricular responsibilities with partner colleges, and make food animal medicine more business oriented
Overall Findings (continued)

• Administrators and food animal faculty were asked a series of questions about opportunities for food animal veterinarians and their experiences with recruiting students for this occupational area. In general, administrators and food animal faculty think there will be many career opportunities that are very promising for food animal veterinarians. In particular, they maintain that demand for this area will increase due to the threat of emerging zoonotic diseases, the increased globalization of the food supply chain, and the threat of bioterrorism/agroterrorism.

• Despite perceptions of increasing demand for this growing area, academicians in Colleges of Veterinary Medicine report that it is very difficult to recruit qualified students to specialize in food production medicine and that careers in food animal medicine are not highly sought after by students. The academicians believe that it is common for students to switch from food animal medicine to other areas such as companion animal medicine during the third year of their education.
A principal components analysis was performed upon the group of 24 student employment selection questions. Five factors emerged that form the influences that academicians believe influence food animal veterinary students to select particular employment areas. This analysis found that academicians think that the underlying constructs of student employment selection include (1) having a lot of free time and not being on-call too often (2) having a strong food animal production orientation (3) the physical demands in a particular occupational area of veterinary medicine (4) having many intellectual challenges that allows them to fully utilize their medical knowledge in their work. A second principal components analysis was performed on eight items that represent potential challenges and opportunities in veterinary medicine for food animal specialists. The analysis identified two factors that form challenges and opportunities for food animal students. These include (1) many career opportunities that will arise from threats related to bioterrorism/agroterrorism, zoonotic diseases, and globalization of the food supply and (2) career challenges related to difficult relations with food animal producers.
Respondent Demographic Profile

• The majority of respondents were male.

• The majority of respondents held the rank of professor or associate professor.

• The mean and median years of age for the respondents was 48 and 51 respectively.

• Responses were obtained from all 32 Schools or Colleges of Veterinary Medicine in the USA and Canada.
 Respondent Gender

Among Deans and food animal faculty

Female

Male

Q79: What is your gender?
Q77: What is your primary job title?

Among Deans and food animal faculty

- Professor
- Associate Professor
- Assistant Professor
- Associate Dean
- Dean
- Instructor
- Other
- Department Head
- Visiting Professor

Estimating FSVM Demand and Maintaining the Availability of Veterinarians for Careers in Food Supply Related Disciplines in the United States and Canada
Respondent Age

Among Deans and food animal faculty

Q78: What is your age?

- 30 or under
- 31 - 37
- 38 - 44
- 45 - 51
- 52 - 58
- 59 - 65
- Over 65

Mean = 48
Median = 51
Modes = 52, 57
Percent of Time Working with a Particular Species

Among Deans and food animal faculty

Q80: Please identify the percent of time that you currently work with the following species.
Influencing Student Employment Selection

Among Deans and food animal faculty

• Deans and food animal faculty were asked a series of open-ended items to identify factors that influence student selection of a career in food supply veterinary medicine.
• The most important factors influencing student selection of a career in food animal medicine were coming from a rural background that was associated with food animal production and enjoying a rural lifestyle and production medicine.
• The most critical factor to get students to change to a career in food animal medicine was early positive exposure to the area in the curriculum and having a positive faculty mentor.
• The major reason students avoid a career in food animal medicine was a lack of exposure to food animal production and agriculture and long work hours with little time left for family activities.
Major Reason to Choose a FSVM Career

Among Deans and food animal faculty

- **Rural Background**
  - Associated with Food Animal Production

- **Enjoy a Rural Lifestyle**
  - / Livestock Production Medicine

- **Large Animal Production Orientation**

- **A Food Animal Veterinary Mentor**

- **Desire a Positive Impact on Agricultural Community**
  - / Food Production

**Q33: What is the one major reason that students choose a career in food animal veterinary medicine?**
Major Reason to Choose a FSVM Career: Rural Background Associated With Food Animal Production (44%)
Major Reason to Choose a FSVM Career: Enjoy a Rural Lifestyle/Livestock Production Medicine (28%)

Verbatim quotations from Deans and food animal faculty

“They like agriculture, they like rural lifestyles, and they want to contribute to those communities.”

“It is all dairy here. Students like cows, farmers, and rural settings”

“They just love working with farmers and farm animals.”

Q33: What is the one major reason that students choose a career in food animal veterinary medicine?
Major Reason to Choose a FSVM Career: Large Animal Production Orientation (14%)

Verbatim quotations from Deans and food animal faculty

“They desire to work with food animals, food animal producers, and to have the freedom to work outside and in changing environments.”

“They enjoy working with livestock at different levels: production medicine, nutrition medicine, surgery, and heard health consultation.”

“An intense dislike of the prospect of having to work with poodles and cats and their owners.”

Q33: What is the one major reason that students choose a career in food animal veterinary medicine?
Major Reason to Choose a FSVM Career: A Food Animal Veterinary Mentor (8%)

Verbatim quotations from Deans and food animal faculty

“They had exposure to a role model veterinarian.”

“They had experience with a mentorship from a successful food animal veterinary practitioner.”

“I grew up in a food animal practice and could not see myself doing anything else.”

Q33: What is the one major reason that students choose a career in food animal veterinary medicine?
Major Reason to Choose a FSVM Career: Desire a Positive Impact on the Agricultural Community/Food Production (6%)

Verbatim quotations from Deans and food animal faculty

“They believe the work is important.”

“They want to make a difference to society.”

“They understand the importance of agriculture and want to participate.”

“They are dedicated to serving the mission of agriculture.”

Q33: What is the one major reason that students choose a career in food animal veterinary medicine?
Q34: What one critical factor would cause students to change to a career in food animal veterinary medicine?

Among Deans and food animal faculty

- Early Positive Exposure to Food Animal Medicine: 32%
- Positive Food Animal Faculty Role Model: 22%
- Intellectually Challenging Career Opportunity: 21%
- Better Salary / Fewer Hours: 18%
- Rural Life / Work Outdoors: 7%
Changing to a FSVM Career: Early Positive Exposure to Food Animal Medicine (32%)

Verbatim quotations from Deans and food animal faculty

“Exposure during preclinical years.”

“I think it is important to expose students to food animal production systems and veterinary careers before they have locked into a career path.”

“Being able to experience all aspects of food animal medicine/surgery/production medicine while on the rotation and through university approved externships.”

Q34: What one critical factor would cause students to change to a career in food animal veterinary medicine?
Changing to a FSVM Career: Positive Food Animal Faculty Role Model (22%)

Verbatim quotations from Deans and food animal faculty

“Better role models in both the private sector and in academia.”

“Enthusiastic role models among veterinary college teachers.”

“Exceptional mentoring by faculty in food animal careers.”

Q34: What one critical factor would cause students to change to a career in food animal veterinary medicine?
Changing to a FSVM Career: Intellectually Challenging Career Opportunity (21%)

Verbatim quotations from Deans and food animal faculty

“A new professional and intellectual challenge that has an impact on society.”

“Learning about the opportunities and challenges that they did not know were there.”

“Many varied opportunities for career options within food animal veterinary medicine.”

Q34: What one critical factor would cause students to change to a career in food animal veterinary medicine?
Changing to a FSVM Career: Better Salary and Fewer Hours (18%)

Verbatim quotations from Deans and food animal faculty

“Money, higher salary and more family time.”

“Opportunity to make money.”

“If the financial compensation were higher.”

“Inability to get time off to pursue recreational and cultural interests.”

Q34: What one critical factor would cause students to change to a career in food animal veterinary medicine?
Changing to a FSVM Career: Rural Life and Work Outdoors

(7%)

Verbatim quotations from Deans and food animal faculty

“If they understood the quality of life and many rewards of a rural life.”

“Looking for a better environment for their family.”

“If they realized that the lifestyle often associated with food animal practice (rural, small town, relaxed) suited them.”

Q34: What one critical factor would cause students to change to a career in food animal veterinary medicine?
Avoiding A FSVM Career

Among Deans and food animal faculty

- No Exposure to Food Animal Production / Animal Agriculture: 33%
- Low Salary: 28%
- Long Hours / Little Family Time: 8%
- Physically Demanding / Dangerous Work: 31%

Q35: What is the single greatest concern that students mention for avoiding a career in food animal medicine?
Avoiding A FSVM Career: No Exposure to Food Animal Production / Animal Agriculture (33%)

Verbatim quotations from Deans and food animal faculty

“A lack of understanding of animal agriculture and animal production systems”

“Don’t know enough about food animal medicine because most of their course work has focused on small animal medicine the first two years of the core curriculum. They feel they are better prepared to handle clients of pets who know little about them as compared to giving advice to a herdsman who is a professional in his own right, and likely has a college degree in some phase of agribusiness.”

Q35: What is the single greatest concern that students mention for avoiding a career in food animal medicine?
Avoiding A FSVM Career: Long Hours / Little Family Time (31%)

Verbatim quotations from Deans and food animal faculty

“After-hours work and location.”

“Hours of work and lack of lifestyle amenities.”

“Hours of work required per week.”

“Lots of hard work with irregular hours.”

Q35: What is the single greatest concern that students mention for avoiding a career in food animal medicine?
Avoiding A FSVM Career: Low Salary (28%)

Verbatim quotations from Deans and food animal faculty

“Financial compensation for time at work.”

“Lack of adequate income to service school debt.”

“Perceived relatively low income.”

“The pay is poor for the number of hours worked and the amount of money needed to pay for veterinary education.”

Q35: What is the single greatest concern that students mention for avoiding a career in food animal medicine?
Avoiding A FSVM Career: Physically Demanding / Dangerous Work (8%) 

Verbatim quotations from Deans and food animal faculty

“ Injury and Intimidation. “

“A physically demanding and strenuous job with little in the way of adequate compensation.”

“Hard work, potential for injury.”

“The work will eat you up (you will be injured or physically unable to practice within 10 years of getting started).”

Q35: What is the single greatest concern that students mention for avoiding a career in food animal medicine?
Q72: In your opinion, what is the one best strategy to encourage students to concentrate on food animal medicine in veterinary school?
Best Strategy to Get Students to Concentrate on Food Animal Medicine: First Year Curricular Exposure to Food Animal Medicine and Successful Practices (34%)

Verbatim quotations from Deans and food animal faculty

“Give them plenty of good quality hands-on experiences with food animals from Day 1 of their DVM program.”

“Getting them interested and involved in year 1 and maintaining that interest and involvement.”

“Early and effective mentoring by high quality practices to show the opportunity and rewards of food animal practice.”

“Early exposure in the curriculum; update the curriculum to reflect food animal vets role in industry and government.”

Q72: In your opinion, what is the one best strategy to encourage students to concentrate on food animal medicine in veterinary school?
Best Strategy to Get Students to Concentrate on Food Animal Medicine: Enthusiastic Faculty and Successful Practitioners as Role Models (33%)

Verbatim quotations from Deans and food animal faculty

“Exposure to passionate food animal practitioners.”

“Early exposure to positive mentors with continued opportunity to develop an in-depth knowledge of food animal medicine to develop competence and confidence.”

“Faculty enthusiasm by far. If the faculty are seen to love what they do, and are seen to vigorously pursue it, students will follow (unfortunately frequently not the case).”

“Enthusiastic informed mentorship.”

Q72: In your opinion, what is the one best strategy to encourage students to concentrate on food animal medicine in veterinary school?
Verbatim quotations from Deans and food animal faculty

“Admit students who have a background and interest already.”

“Admit individuals with an animal science degree; selection of students with agricultural or public health experience and a rural background.”

“Admit students that were raised on successful ranches.”

“Admit students committed to food animal practice.”

Q72: In your opinion, what is the one best strategy to encourage students to concentrate on food animal medicine in veterinary school?
Best Strategy to Get Students to Concentrate on Food Animal Medicine: Offer Early Admissions, Scholarships, Debt Forgiveness, and Paid Externships (12%)

Verbatim quotations from Deans and food animal faculty

“Debt forgiveness; loan payback programs if the student commits to food animal practice.”

“Early admissions/scholarships for qualified students.”

“Offer loan forgiveness for entering the career after graduation.”

“Provide strong positive role models at the university and facilitate appealing, paid externship experiences.”

Q72: In your opinion, what is the one best strategy to encourage students to concentrate on food animal medicine in veterinary school?
Lifetime Commitment and Career Benefits

Among Deans and food animal faculty

- Deans and food animal faculty were asked a series of open-ended items to identify factors that influence recent alumni to make a commitment to a career in food supply veterinary medicine and the major benefits of that type of career.

- The most important factors influencing a lifetime commitment to a career in food animal medicine were having a satisfactory experience in their first job with a good salary and manageable work hours.

- The best strategies that Colleges of Veterinary Medicine could use to get alumni to make a career commitment in food animal medicine were to admit students with a rural background and food animal experience and provide a positive faculty mentor and funded externships/scholarships.

- The major benefits for students choosing a career in food animal medicine were a high income in a satisfying job while working with friendly people and enjoying a high quality rural lifestyle.
Making a Lifetime Commitment to FSVM

Q36: What one critical factor would cause recent alumni to make a lifetime commitment to a career in food animal medicine?

Among Deans and food animal faculty

- Good Salary / Better Hours: 35%
- Positive Mentoring / Exposure to Production Medicine: 27%
- Positive Contribution to Safe Food for Society: 18%
- Rural Lifestyle / Working Outdoors: 12%
- Satisfying First Job in a Nurturing Environment: 8%
Verbatim quotations from Deans and food animal faculty

“Getting a start in a good forward-looking food animal job.”

“Good experience in first job after graduation.”

“Good first-year experience.”

“Good lifestyle with first job.”

Q36: What one critical factor would cause recent alumni to make a lifetime commitment to a career in food animal medicine?
Estimating FSVM Demand and Maintaining the Availability of Veterinarians for Careers in Food Supply Related Disciplines in the United States and Canada

Verbatim quotations from Deans and food animal faculty

“Better long-term lifestyle, less hours worked.”

“Better quality of life (less after-hours work).”

“Better paying jobs.”

“Financial Compensation.”

“Pay them appropriately.”

Q36: What one critical factor would cause recent alumni to make a lifetime commitment to a career in food animal medicine?
Verbatim quotations from Deans and food animal faculty

“Excellent mentoring.”

“Early mentoring and advising of late pre-vet students and early veterinary students so that they know that food animal veterinary medicine is an option even if they did not grow up on a farm.”

“Experience on the family farm.”

“Familiarity with food animals before veterinary training.”

Q36: What one critical factor would cause recent alumni to make a lifetime commitment to a career in food animal medicine?
Making a Lifetime Commitment to FSVM: Positive Contribution to Safe Food for Society (12%)

Verbatim quotations from Deans and food animal faculty

“Understanding the importance of their role in agriculture.”

“Valuing the long-term animal welfare and societal benefits of food animal practice.”

“If they could see the overall picture of how important their role could be in today’s food supply.”

Q36: What one critical factor would cause recent alumni to make a lifetime commitment to a career in food animal medicine?
Verbatim quotations from Deans and food animal faculty

“The outdoor lifestyle.”

“Returning to a lifestyle in the country.”

“Lifestyle preference. They like working with the animals and people involved with animal agriculture.”

“Lifestyle, an opportunity to buy into a practice where they want to live.”

Q36: What one critical factor would cause recent alumni to make a lifetime commitment to a career in food animal medicine?
Getting Alumni to Commit to a FSVM Career

Among Deans and food animal faculty

Q37: What are two strategies that a veterinary medical college could do to get your alumni to commit to a food animal career?

- Admit more Students with Rural Background / Food Animal Experience
- Early Positive Mentorship and Funded Externships / Scholarships
- Increase Quality / Quantity of Food Animal Cases, Courses, Rotations / Track Students
- Advertise Positive Food Animal Career Options
- Continuing Education

Estimating FSVM Demand and Maintaining the Availability of Veterinarians for Careers in Food Supply Related Disciplines in the United States and Canada
Getting Alumni to Commit to a FSVM Career: Admit More Students with Rural Background / Food Animal Experience (29%)

Verbatim quotations from Deans and food animal faculty

“Admission quotas for students from rural areas / rural background.”

“Admit a percentage of students every year with a strong food animal background.”

“Admit and select students with experience in food animal sector.”

“Admit more students from rural backgrounds.”

Q37: What are two strategies that a veterinary medical college could do to get your alumni to commit to a food animal career?
Getting Alumni to Commit to a FSVM Career: Early Positive Mentorship and Funded Externships / Scholarships (26%)

Verbatim quotations from Deans and food animal faculty

“Exposure to a successful food animal practice – paid summer programs.”

“Externships with progressive food-animal practices.”

“Get students opportunities to work with lots of food-animal practitioners.”

“Early mentorship.”

“Great faculty mentors.”

Q37: What are two strategies that a veterinary medical college could do to get your alumni to commit to a food animal career?
Getting Alumni to Commit to a FSVM Career: Increase Quality / Quantity of Food Animal Cases, Courses, Rotations / Track Students (25%)

Verbatim quotations from Deans and food animal faculty
“Make curriculum more food-animal friendly”

“Make food-animal medicine a priority in resources and action.”

“Early exposure in the veterinary curriculum to opportunities in food animal medicine.”

“Maintain a strong focus on food-animal medicine throughout the curriculum with hands-on experience starting in the first year of the program.”

Q37: What are two strategies that a veterinary medical college could do to get your alumni to commit to a food animal career?
“Provide awareness programs of opportunities in the field.”

“Better communication of the opportunities in food-animal careers.”

“Inform them of the number of different options within the field.”

“Information campaign on opportunities for food animal practice.”

Q37: What are two strategies that a veterinary medical college could do to get your alumni to commit to a food animal career?
Verbatim quotations from Deans and food animal faculty

“Continuing education for practice owners on how to mentor / motivate / reward new employees.”

“Continuing education on food animal opportunities.”

“Continuing education programs taught by alumni who have made the switch to food animals or epidemiology.”

“Effective post-graduate continuing education programs.”

Q37: What are two strategies that a veterinary medical college could do to get your alumni to commit to a food animal career?
Benefits for Students Choosing Food Animal Careers

Among Deans and food animal faculty

- High Income and High Job Satisfaction from Intellectual Challenges: 34%
- Working with Friendly Rural People / High Quality Rural Lifestyle: 21%
- Contributions to Safe / Wholesome Food Supply: 5%
- Diversity of Career Options Including Industry, Public Health, Consulting, and Food Safety: 5%
- Respected Leadership Role In Community: 5%

Q38: What are the two biggest benefits you see for students that choose a food animal veterinary career?
Benefits For Students Choosing A Food Animal Career: High Income and High Job Satisfaction From Intellectual Challenges (34%) 

Verbatim quotations from Deans and food animal faculty

“Intellectually stimulating challenges of working in production agriculture and food supply medicine.”

“Challenging and ever changing work.”

“Good paying jobs, since less than 10% go into food animal practice.”

“Money…with the dollars at risk, food animal practitioners are paid very well.”

Q38: What are the two biggest benefits you see for students that choose a food animal veterinary career?
Benefits For Students Choosing A Food Animal Career: Working with Friendly, Rural People/High Quality Rural Lifestyle (35%)

Verbatim quotations from Deans and food animal faculty

“Being part of a rural community; rewarding lifestyle.”

“Community respect and position…and the best setting for raising a family.”

“Life outside of a big city; rural lifestyle----not working in an office building 24/7.”

“Opportunity to work in a rural environment with livestock clientele.”

Q38: What are the two biggest benefits you see for students that choose a food animal veterinary career?
Benefits For Students Choosing A Food Animal Career: Contributions to Safe/Wholesome Food Supply (21%)

Verbatim quotations from Deans and food animal faculty

“Pride that they are contributing to a safe food supply for the nation.”

“The ability to positively impact animal welfare and society to a magnitude that companion animal practitioners cannot imagine.”

“Sense of importance to society for the protection and preservation of our food supply.”

“Great opportunities to support USA agriculture in feeding our nation.”

Q38: What are the two biggest benefits you see for students that choose a food animal veterinary career?
Benefits For Students Choosing A Food Animal Career: Diversity of Career Options Including Industry, Public Health, Consulting and Food Safety (5%)

Verbatim quotations from Deans and food animal faculty

“Opportunity to work in a variety of careers associated with food animals and food supply.”

“Provides a career that also provides the experience and knowledge to do public health work and or epidemiology.”

“A broad range of non-traditional careers paths (from livestock management to consulting practice to pharmaceutical/feed industry involvement.”

Q38: What are the two biggest benefits you see for students that choose a food animal veterinary career?
Verbatim quotations from Deans and food animal faculty

“Respect/prominence in small communities.”

“Respect within the communities they serve.”

“Being a leader within a community.”

“A rural lifestyle in which they become respected members of the community.”

Q38: What are the two biggest benefits you see for students that choose a food animal veterinary career?
Financial Issues and Meaningful Work

Among Deans and food animal faculty

• The majority of food animal students are seen as being worried about repaying debts (74%), and wanting a veterinary job that is personally meaningful (97%).

• The majority (80%) of food animal students are seen as feeling their major satisfactions in life will come from their veterinary job and that their careers will be as intellectually challenging as a career in companion animal medicine (85%).

• Most Deans and food animal faculty (73%) perceive that food animal students think they will fully utilize their medical knowledge.
### Percentage Distribution of Employment Area Variables Among Food Animal Students: Financial Issues and Meaningful Work

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tbody>
<tr>
<td>Food animal students are extremely worried about repaying their loans for veterinary medical school.</td>
<td>74</td>
<td>26</td>
<td>5.17</td>
<td>1.46</td>
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<tr>
<td>Food animal students feel that veterinarians who have a lot of money are happier than veterinarians who have only a little money</td>
<td>46</td>
<td>54</td>
<td>4.22</td>
<td>1.425</td>
</tr>
<tr>
<td>It is vital to food animal students that their veterinary job be personally meaningful</td>
<td>97</td>
<td>3</td>
<td>6.19</td>
<td>.870</td>
</tr>
<tr>
<td>Food animal students feel that the major satisfactions in life will come from their veterinary job</td>
<td>80</td>
<td>20</td>
<td>5.18</td>
<td>1.23</td>
</tr>
<tr>
<td>Food animal students perceive their career to be as intellectually challenging as a career in companion animal medicine</td>
<td>85</td>
<td>15</td>
<td>5.69</td>
<td>1.33</td>
</tr>
<tr>
<td>Food animal students think they will be able to fully utilize their medical knowledge in their careers</td>
<td>73</td>
<td>27</td>
<td>5.08</td>
<td>1.42</td>
</tr>
</tbody>
</table>
Lifestyle Issues and Employment Selection

Among Deans and food animal faculty

• The majority of food animal students are seen as being worried about having enough time to raise a family (82%), and wanting a veterinary job where they can control their work hours (78%).

• The majority (74%) of food animal students are seen as thinking that vacation time from their job is very important.

• Most Deans and food animal faculty (67%) perceive that food animal students think rural areas have enough recreational and cultural activities and do not mind working nights or weekends (70%).
### Percentage Distribution of Employment Area Variables Among Food Animal Students: Lifestyle

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food animal students are very concerned about the ability of their spouse to find a job close to work</td>
<td>61</td>
<td>39</td>
<td>4.96</td>
<td>1.39</td>
</tr>
<tr>
<td>Food animal students worry about having enough time to raise a family</td>
<td>82</td>
<td>18</td>
<td>5.34</td>
<td>1.27</td>
</tr>
<tr>
<td>Food animal students are concerned that they will have to travel too much in their veterinary work</td>
<td>44</td>
<td>56</td>
<td>4.21</td>
<td>1.51</td>
</tr>
<tr>
<td>Food animal students want a veterinary career where they can control the number of hours they work and when they work them</td>
<td>78</td>
<td>22</td>
<td>5.12</td>
<td>1.37</td>
</tr>
<tr>
<td>Food animal students do not want to be on call very often in their veterinary medicine jobs</td>
<td>46</td>
<td>54</td>
<td>4.25</td>
<td>1.50</td>
</tr>
<tr>
<td>Vacation time from their veterinary job is very important to food animal students</td>
<td>74</td>
<td>26</td>
<td>5.09</td>
<td>1.26</td>
</tr>
<tr>
<td>Food animal students think that rural areas do not have enough recreational or cultural amenities</td>
<td>33</td>
<td>67</td>
<td>3.56</td>
<td>1.44</td>
</tr>
<tr>
<td>Food animal students would be upset if they had to regularly work nights or weekends in their veterinary career</td>
<td>30</td>
<td>70</td>
<td>3.54</td>
<td>1.51</td>
</tr>
</tbody>
</table>

Estimating FSVM Demand and Maintaining the Availability of Veterinarians for Careers in Food Supply Related Disciplines in the United States and Canada

17-65
Production Orientation and Employment Selection

Among Deans and food animal faculty

- The majority of food animal students are seen as valuing a strong mentorship/training program in their first job (93%), and that food animal producers are not too concerned with making a profit (85%).
- The majority of Deans and faculty (68%) perceive that food animal students desire a job that helps them protect the nation’s food supply and think that livestock producers value their services (87%).
- Most Deans and food animal faculty (90%) perceive that food animal students like the thought of caring for herds/flocks of food animals.
- Food animal students are seen as being positively influenced by their experiences in veterinary school (82%).
### Percentage Distribution of Employment Area Variables Among Food Animal Students: Production Orientation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food animal students worry a lot about the lack of good jobs</td>
<td>44</td>
<td>56</td>
<td>3.84</td>
<td>1.80</td>
</tr>
<tr>
<td>Food animal students value a strong mentorship/training program in their first veterinary job</td>
<td>93</td>
<td>7</td>
<td>5.84</td>
<td>1.29</td>
</tr>
<tr>
<td>Food animal students think food producers are too concerned with making a profit</td>
<td>15</td>
<td>85</td>
<td>2.93</td>
<td>1.30</td>
</tr>
<tr>
<td>Food animal students desire a job that allows them to protect the nation's food supply</td>
<td>68</td>
<td>32</td>
<td>4.92</td>
<td>1.26</td>
</tr>
<tr>
<td>Food animal students believe livestock producers value their services</td>
<td>87</td>
<td>13</td>
<td>5.37</td>
<td>1.21</td>
</tr>
<tr>
<td>The thought of caring for herds/flocks of food animals is very appealing to food animal students</td>
<td>90</td>
<td>10</td>
<td>5.71</td>
<td>1.21</td>
</tr>
</tbody>
</table>
### Percentage Distribution of Employment Area Variables Among Food Animal Students: Production Orientation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food animal students' experiences while in veterinary medical school positively influences the work they want to do in their career</td>
<td>82</td>
<td>18</td>
<td>5.52</td>
<td>1.55</td>
</tr>
<tr>
<td>Consolidation among food animal producers will make it more difficult to be a food animal veterinarian</td>
<td>50</td>
<td>50</td>
<td>4.10</td>
<td>1.70</td>
</tr>
<tr>
<td>A major challenge in veterinary medicine is that food animal producers often ignore the veterinarian's advice</td>
<td>54</td>
<td>46</td>
<td>4.31</td>
<td>1.52</td>
</tr>
<tr>
<td>Food animal producers are not very willing to pay for the types of services offered by veterinarians</td>
<td>49</td>
<td>51</td>
<td>4.16</td>
<td>1.63</td>
</tr>
<tr>
<td>Food animal students are concerned over their ability to buy into a food animal practice</td>
<td>42</td>
<td>58</td>
<td>4.20</td>
<td>1.33</td>
</tr>
<tr>
<td>The veterinary education students receive prepares them extremely well to work in a food animal practice</td>
<td>48</td>
<td>52</td>
<td>4.05</td>
<td>1.71</td>
</tr>
</tbody>
</table>
**Encouraging Food Animal Careers: Recruitment/Admissions**

Among Deans and food animal faculty

- The majority of Deans and faculty (78%) like the idea of reserving class slots for committed, qualified food animal students and offering early admissions (68%).
- The majority of Deans and faculty (88%) want to provide substantial scholarships to food animal students and establish a mentoring/shadowing program to match high school students with food animal veterinarians (90%).
- Most Deans and food animal faculty (71%) think that giving high school students brochures about food animal careers and having an Animal Planet television show about food animals (67%) would encourage students to select this area.
- Deans and food animal faculty (73%) think an orientation session on career options in food animal medicine before classes begin would encourage students to select this area.
- Most Deans and food animal faculty (71%) oppose deemphasizing standardized test scores and GPA for food animal student admission decisions and oppose using a gender based admission process (75%).
### Percentage Distribution of Encouraging Food Animal Careers: Recruitment / Admissions

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserve class slots for academically qualified applicants who express a commitment to food animal veterinary medicine</td>
<td>78</td>
<td>22</td>
<td>5.11</td>
<td>1.55</td>
</tr>
<tr>
<td>Early admission decisions for academically qualified applicants who express a commitment to food animal veterinary medicine</td>
<td>68</td>
<td>32</td>
<td>4.79</td>
<td>1.52</td>
</tr>
<tr>
<td>Providing substantial scholarships to those interested in food animal veterinary medicine</td>
<td>88</td>
<td>12</td>
<td>5.64</td>
<td>1.32</td>
</tr>
<tr>
<td>Establishment of a mentoring / shadowing program that matches high school students with food animal veterinarians.</td>
<td>90</td>
<td>10</td>
<td>5.57</td>
<td>1.23</td>
</tr>
<tr>
<td>Provide high school and undergraduate college students with brochures about different food animal veterinary careers</td>
<td>71</td>
<td>29</td>
<td>4.79</td>
<td>1.38</td>
</tr>
<tr>
<td>Produce an Animal Planet television show about food animals to compete with &quot;Emergency Vets.&quot;</td>
<td>67</td>
<td>33</td>
<td>4.83</td>
<td>1.43</td>
</tr>
</tbody>
</table>
### Percentage Distribution of Encouraging Food Animal Careers: Recruitment / Admissions

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribute a compact disc to high school students featuring food animal veterinarian careers</td>
<td>58</td>
<td>42</td>
<td>4.54</td>
<td>1.33</td>
</tr>
<tr>
<td>Orientation session highlighting career options in food animal veterinary fields before classes begin</td>
<td>73</td>
<td>27</td>
<td>4.91</td>
<td>1.26</td>
</tr>
<tr>
<td>Deemphasize standardized test scores and GPA for food animal admission</td>
<td>29</td>
<td>71</td>
<td>3.40</td>
<td>1.75</td>
</tr>
<tr>
<td>Use a gender admission process to create a more balanced male-female student ratio</td>
<td>25</td>
<td>75</td>
<td>3.23</td>
<td>1.78</td>
</tr>
</tbody>
</table>
Encouraging Food Animal Careers: Starting a Practice

Among Deans and food animal faculty

• The majority of Deans and food animal faculty (70%) think that assistance in implementing a food animal practice would encourage students to concentrate in food animal medicine in veterinary schools.

• The majority of Deans and faculty (69%) think that providing extra job placement services for food animal careers would encourage more students to concentrate in food animal medicine in veterinary school.
Q42: Assistance in implementing a food animal practice (e.g., advice on site selection, accounting, finance, legal issues, etc.)
Financial Assistance to Purchase Equipment

Among Deans and food animal faculty

Q43: Financial assistance in purchasing equipment to begin a food animal practice
Extra Job Placement

Among Deans and food animal faculty

Q44: Provide extra job placement services for food animal veterinary careers
Encouraging Food Animal Careers: Curriculum Issues

Among Deans and food animal faculty

• The majority of Deans and food animal faculty think the following are good curricular strategies to encourage more students to concentrate on food animal medicine in veterinary colleges:
  • Assign a food animal faculty mentor (89%)
  • Offer paid 8-week externship in food animal medicine (91%)
  • Increase the clinical caseload of food animals at your veterinary college (77%)
  • Encourage faculty enthusiasm about food animal careers (89%)
  • Letting students study and treat food animals in the first semester (79%)
  • State funded legislation to forgive food animal student loans for a work commitment in the state (90%).
### Percentage Distribution of Encouraging Food Animal Careers: Curriculum Issues

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assigning interested students a food animal faculty mentor</td>
<td>89</td>
<td>11</td>
<td>5.62</td>
<td>1.16</td>
</tr>
<tr>
<td>Making students select a curriculum track that provides detailed knowledge in food animal medicine</td>
<td>56</td>
<td>44</td>
<td>4.56</td>
<td>1.68</td>
</tr>
<tr>
<td>Offer paid 8-week summer externships in food animal medicine</td>
<td>91</td>
<td>9</td>
<td>5.67</td>
<td>1.12</td>
</tr>
<tr>
<td>Eliminate the &quot;generalist&quot; model of the veterinary curriculum in favor of specific tracks</td>
<td>40</td>
<td>60</td>
<td>3.84</td>
<td>1.85</td>
</tr>
<tr>
<td>Have students take two years of generalized veterinary courses and then specialize in a species track</td>
<td>53</td>
<td>47</td>
<td>4.20</td>
<td>1.68</td>
</tr>
<tr>
<td>Increase the clinical caseload for food animals at your veterinary college</td>
<td>77</td>
<td>23</td>
<td>5.16</td>
<td>1.44</td>
</tr>
<tr>
<td>Encourage faculty enthusiasm about food animal careers</td>
<td>89</td>
<td>11</td>
<td>5.77</td>
<td>1.14</td>
</tr>
<tr>
<td>A first semester program in veterinary medical school that lets students study and treat food animals</td>
<td>79</td>
<td>21</td>
<td>5.15</td>
<td>1.35</td>
</tr>
<tr>
<td>State funded legislation to forgive food animal student loans for a five year work commitment in the state</td>
<td>90</td>
<td>10</td>
<td>5.78</td>
<td>1.19</td>
</tr>
</tbody>
</table>
Encouraging Food Animal Careers: Centers for Excellence In Food Animal Medicine and Management (CEFAMM)

Among Deans and food animal faculty

- The majority of Deans and food animal faculty think the following are good strategies to encourage more students to concentrate on food animal medicine in veterinary colleges:
  - Create regional centers for excellence in food animal medicine (80%)
  - Make food animal medicine more business oriented (72%)
  - Improve competency in business aspects of food animal medicine (84%)
  - Share food animal curricular responsibilities with partnered colleges (73%)
  - Have food animal students rotate among colleges to capitalize on food animal faculty expertise (80%).
## Percentage Distribution of Encouraging Food Animal Careers: Centers for Excellence In Food Animal Medicine and Management (CEFAMM)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a regional center for excellence in food animal medicine at your university</td>
<td>80</td>
<td>20</td>
<td>5.46</td>
<td>1.37</td>
</tr>
<tr>
<td>Make food animal education more business oriented</td>
<td>72</td>
<td>28</td>
<td>4.96</td>
<td>1.28</td>
</tr>
<tr>
<td>Improve competency in business aspects of food animal medicine</td>
<td>84</td>
<td>16</td>
<td>5.22</td>
<td>1.15</td>
</tr>
<tr>
<td>Have colleges of veterinary medicine focus exclusively on a particular food animal species (e.g., swine)</td>
<td>37</td>
<td>63</td>
<td>3.88</td>
<td>1.58</td>
</tr>
<tr>
<td>Share food animal curriculum responsibilities with partnered colleges of veterinary medicine</td>
<td>73</td>
<td>28</td>
<td>4.90</td>
<td>1.47</td>
</tr>
<tr>
<td>Have food animal students rotate among colleges of veterinary medicine to capitalize on food animal faculty expertise.</td>
<td>80</td>
<td>20</td>
<td>5.28</td>
<td>1.39</td>
</tr>
</tbody>
</table>
Encouraging Food Animal Careers: Post Graduate Strategies

Among Deans and food animal faculty

• The majority of Deans and food animal faculty think the following are good strategies to encourage alumni to commit to a food animal career:
  • Encourage graduating students to enter group practices in food animal medicine (70%)
  • Incorporate veterinary technicians into daily food animal practice (75%)
### Percentage Distribution of Encouraging Food Animal Careers: Post-Graduate Strategies

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent Agree</th>
<th>Percent Disagree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory continuing education at veterinary colleges for continued food animal licensure</td>
<td>35</td>
<td>65</td>
<td>3.84</td>
<td>1.64</td>
</tr>
<tr>
<td>Encourage graduating students to enter group practices in food animal medicine</td>
<td>70</td>
<td>30</td>
<td>4.96</td>
<td>1.17</td>
</tr>
<tr>
<td>Incorporating veterinary technicians into daily food animal practice</td>
<td>75</td>
<td>25</td>
<td>5.24</td>
<td>1.24</td>
</tr>
<tr>
<td>Have professional associations provide information about average prices for food animal veterinary services</td>
<td>58</td>
<td>42</td>
<td>4.57</td>
<td>1.25</td>
</tr>
</tbody>
</table>
Encouraging Food Animal Careers: Safety Concerns

Among Deans and food animal faculty

• The majority of Deans and food animal faculty (61%) think that food animal students worry about being injured when working with food animals but that students are not intimidated by the size of many food animals (88%).
Students Injury Concerns

Among Deans and food animal faculty

Q17: Food animal students worry they might be injured when working with large animals
Large Animal Concerns As Veterinarians Age

Among Deans and food animal faculty

Q18: Food animal students worry they will be physically unable to deal with large animals when they are older
Intimidated by Food Animal Size

Among Deans and food animal faculty

Q24: Food animal students are intimidated by the size of many food animals
Opportunities in Veterinary Medicine

Among Deans and food animal faculty

• The majority of Deans and food animal faculty (80%) think that the threat of emerging zoonotic diseases creates many career opportunities for food animal students.

• Deans and food animal faculty (79%) think that the increased globalization of the food supply chain will create career opportunities.

• The threat of bioterrorism/agro terrorism will create will create career opportunities for food animal students (73%).
Q30: The threat of emerging zoonotic diseases creates many career opportunities for food animal students
Increased Globalization Opportunities

Among Deans and food animal faculty

Q31: The increased globalization of the food supply chain creates many career opportunities for food animal students
Bio/Agro Terrorism Opportunities

Among Deans and food animal faculty

Q32: The threat of bioterrorism/agro terrorism creates many career opportunities for food animal students
Food Animal Student Recruitment

Among Deans and food animal faculty

- The majority of Deans and food animal faculty (60%) think that it is very difficult to recruit qualified students that want to specialize in food animal medicine.
- Deans and food animal faculty (79%) think careers in food animal medicine are not highly sought after by student applicants.
- Deans and food animal faculty (63%) think that it is common for students to switch from food animal medicine to other veterinary areas such as companion animal medicine at veterinary school. This switching of career areas usually happens in the third year of study.
Q73: It is very difficult to recruit qualified students that want to specialize in food animal medicine at my veterinary school
Applicants Seek FSVM Careers

Among Deans and food animal faculty

Q74: Careers in food animal medicine are highly sought after by our student applicants

Estimating FSVM Demand and Maintaining the Availability of Veterinarians for Careers in Food Supply Related Disciplines in the United States and Canada
Students Commonly Switch Areas

Among Deans and food animal faculty

Q75: It is common for students to switch from food animal medicine to other veterinary areas such as companion animal medicine at our veterinary school
Q76. What year in your program are your food animal students most likely to switch to other veterinary areas such as companion animal medicine?

Among Deans and food animal faculty

- **No Answer**
- First year
- Second year
- Third year
- Fourth year
- Fifth year
- DVM program completed, continuing education

Mean = 2.96
Median = 3
Mode = 3rd year
Factor Analysis of Student Employment Selection Constructs

- Principal components analysis was performed on all food animal student employment selection questions in order to reduce the large number of items into a smaller set of homogeneous factors.

- Four multi-item factors emerged from this analysis that illustrated adequate factor structure (e.g., high factor loadings and minimal cross-loadings), acceptable Cronbach alpha levels, and logical substantive meaning across items.

- These factors are used to identify what Deans and food animal faculty think influences food animal veterinary students to select particular employment areas.
Student Employment Selection Constructs

Factor analysis of 24 items that influence student employment selection areas

Underlying constructs of employment selection:

- Food animal students are seen as viewing free time as an important employment selection construct.

- Food animal students are viewed as having a strong food animal orientation as an underlying employment selection construct.

- Food animal students are perceived as being concerned about the physical demands of the job when they make an employment selection decision.

- Intellectual challenges as seen as an important influencer of student employment decisions.
Factor Analysis of Food Animal Student Perceptions of Employment Areas

The four factors emerging from the PCA.

- Free Time
- Food Animal Orientation
- Intellectual Challenge
- Physically Demanding
Factor Analysis of Food Animal Student Perceptions of Employment Areas

Survey items comprising Free Time factor

- Food Animal students do not want to be on call very often in their veterinary medicine jobs
- Food animal students would be upset if they had to regularly work nights or weekends in their veterinary career
- Vacation time from their veterinary jobs is very important to food animal students
- Food animal students want a veterinary career where they can control the number of hours they work and when they work them
Factor Analysis of Food Animal Student Perceptions of Employment Areas

Survey items comprising Food Animal Orientation factor

- Food animal students believe livestock producers value their services
- The thought of caring for herds/flocks of food animals is very appealing to food animal students
- Food animal students desire a job that allows them to protect the nation’s food supply
Factor Analysis of Food Animal Student Perceptions of Employment Areas

Survey items comprising Physically Demanding factor

- Food animal students worry they will be physically unable to deal with large animals when they are older
- Food animal students worry they might be injured when working with large animals
Factor Analysis of Food Animal Student Perceptions of Employment Areas

Survey items comprising Intellectual Challenges factor

- Food animal students think they will be able to fully utilize their medical knowledge in their careers
- Food animal students perceive their career to be as intellectually challenging as a career in companion animal medicine
Factor Analysis of Food Animal Challenges and Opportunities Constructs

• Principal components analysis was performed on all food animal challenges and opportunities questions in order to reduce the large number of items into a smaller set of homogeneous factors.

• Two multi-item factors emerged from this analysis that illustrated adequate factor structure (e.g., high factor loadings and minimal cross-loadings), acceptable Cronbach alpha levels, and logical substantive meaning across items.

• Factors constructs are used to identify what Deans and food animal faculty think are potential challenges and opportunities in veterinary medicine for food animal veterinary students.
Challenges and Opportunities Constructs

Factor analysis of 8 items that represent challenges and opportunities

Underlying constructs of challenges and opportunities:

- Many career opportunities for food animal students arise from the threats of bioterrorism/agro terrorism, emerging zoonotic diseases, and globalization of the food supply.

- Relationships with food animal producers will present challenges for food animal students.
Factor Analysis of Food Animal Veterinary Challenges and Opportunities

The two factors emerging from the PCA.

Opportunities

Food Animal Producers
Factor Analysis of Food Animal Veterinary Challenges and Opportunities

Survey items comprising Opportunities factor

- The threat of bioterrorism/agroterrorism creates many career opportunities for food animal students
- The threat of emerging zoonotic diseases creates many career opportunities for food animal students
- The increased globalization of the food supply chain creates many career opportunities for food animal students
Factor Analysis of Food Animal Veterinary Challenges and Opportunities

Survey items comprising Food Animal Producers factor

- Food animal producers are not willing to pay for the types of services offered by veterinarians
- A major challenge in veterinary medicine is that food animal producers often ignore the veterinarian’s advice
- Consolidation among food animal producers will make it difficult to be a food animal veterinarian
Factor Analysis of Encouraging Food Animal Career Constructs

- Principal components analysis was performed on all encouraging food animal career questions in order to reduce the large number of items into a smaller set of homogeneous factors.

- Five multi-item factors emerged from this analysis that illustrated adequate factor structure (e.g., high factor loadings and minimal cross-loadings), acceptable Cronbach alpha levels, and logical substantive meaning across items.

- Factors constructs are used to identify what Deans and food animal faculty think are effective activities to encourage more students to concentrate on food animal medicine in veterinary colleges.
Encouraging Food Animal Career Constructs

Factor analysis of 28 items that represent activities to encourage food animal careers

Underlying constructs of activities that colleges should pursue:

- Colleges of Veterinary Medicine should share curricular responsibilities with partnered colleges, rotate students, and emphasize business management to a greater extent.

- Food animal veterinary careers should be promoted to a greater extent.

- Early admission decisions and class slots should be reserved for food animal students.

- Curricular tracks should be considered.

- Assistance should be given to help start a food animal practice.
Factor Analysis of Encouraging Food Animal Careers at Veterinary Medical Colleges

The five factors emerging from the PCA.

- Shared Curriculum / Business Competency
- Business Startup
- Admissions
- Promotion
- Track Students
Factor Analysis of Encouraging Food Animal Careers at Veterinary Medical Colleges

Survey items comprising Shared Curriculum/Business Competency factor

- Share food animal curriculum responsibilities with partnered colleges of veterinary medicine
- Have food animal students rotate among colleges of veterinary medicine to capitalize on food animal faculty expertise
- Improve competency in business aspects of food animal medicine
- Make food animal education more business oriented
Factor Analysis of Encouraging Food Animal Careers at Veterinary Medical Colleges

Survey items comprising Promotion factor

- Distribute a compact disc to high school students featuring food animal veterinary careers
- Provide high school and undergraduate college students with brochures about different food animal veterinary careers
- Orientation session highlighting career options in food animal veterinary fields before classes begin
- Produce an Animal Planet television show about food animals to compete with “Emergency Vets”
Survey items comprising Admissions factor

- Reserve class slots for academically qualified applicants who express a commitment to food animal veterinary medicine
- Early admission decisions for academically qualified applicants who express a commitment to food animal veterinary medicine
- Use a gender admission process to create a more balanced male-female student ratio
- Deemphasize standardized test scores and GPA for food animal admissions
Factor Analysis of Encouraging Food Animal Careers at Veterinary Medical Colleges

Survey items comprising Track Students factor

- Eliminate the “generalist” model of the veterinary curriculum in favor of specific tracks
- Have students take two years of generalized veterinary courses and then specialize in a species track
- Making students select a curriculum track that provides detailed knowledge in food animal medicine
Factor Analysis of Encouraging Food Animal Careers at Veterinary Medical Colleges

Survey items comprising Business Startup factor

- Financial assistance in purchasing equipment to begin a food animal practice
- Assistance in implementing a food animal practice (e.g., advice on site selection, accounting, finance, legal issues, etc.)
## Principal Component Analysis within Food Animal Student Perceptions of Employment Areas

<table>
<thead>
<tr>
<th>Scale Items</th>
<th>Free Time</th>
<th>Food Animal Orientation</th>
<th>Physically Demanding</th>
<th>Intellectual Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food animal students do not want to be on call very often in their veterinary medicine jobs.</td>
<td>0.821</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students would be upset if they had to regularly work nights or weekends in their veterinary career.</td>
<td>0.781</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacation time from their veterinary job is very important to food animal students.</td>
<td>0.780</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students want a veterinary career where they can control the number of hours they work and when they work them.</td>
<td>0.724</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students believe livestock producers value their services</td>
<td>0.816</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The thought of caring for herds/flocks of food animals is very appealing to food animal students</td>
<td>0.776</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students desire a job that allows them to protect the nation’s food supply</td>
<td>0.688</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students worry they will be physically unable to deal with large animals when they are older.</td>
<td>0.884</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students worry they might be injured when working with large animals.</td>
<td>0.872</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students think they will be able to fully utilize their medical knowledge in their careers.</td>
<td>0.908</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food animal students perceive their career to be as intellectually challenging as a career in companion animal medicine</td>
<td>0.907</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance accounted for (%)</td>
<td>23.03</td>
<td>17.26</td>
<td>16.89</td>
<td>15.64</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>2.53</td>
<td>1.89</td>
<td>1.85</td>
<td>1.72</td>
</tr>
<tr>
<td>Scale Mean Values</td>
<td>4.50</td>
<td>5.33</td>
<td>3.99</td>
<td>5.38</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>0.813</td>
<td>0.672</td>
<td>0.836</td>
<td>0.826</td>
</tr>
</tbody>
</table>
# Principal Component Analysis within Food Animal Veterinary Challenges and Opportunities

<table>
<thead>
<tr>
<th>Scale Items</th>
<th>Opportunities</th>
<th>Food Animal Producers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The threat of bioterrorism/agro terrorism creates many career opportunities for food animal students</td>
<td>0.920</td>
<td></td>
</tr>
<tr>
<td>The threat of emerging zoonotic diseases creates many career opportunities for food animal students</td>
<td>0.913</td>
<td></td>
</tr>
<tr>
<td>The increased globalization of the food supply chain creates many career opportunities for food animal students</td>
<td>0.892</td>
<td></td>
</tr>
<tr>
<td>Food animal producers are not very willing to pay for the types of services offered by veterinarians</td>
<td></td>
<td>0.816</td>
</tr>
<tr>
<td>A major challenge in veterinary medicine is that food animal producers often ignore the veterinarian's advice</td>
<td></td>
<td>0.782</td>
</tr>
<tr>
<td>Consolidation among food animal producers will make it difficult to be a food animal veterinarian.</td>
<td></td>
<td>0.693</td>
</tr>
<tr>
<td>Variance accounted for (%)</td>
<td>41.39</td>
<td>29.42</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>2.48</td>
<td>1.76</td>
</tr>
<tr>
<td>Scale Mean Values</td>
<td>5.24</td>
<td>4.18</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>0.895</td>
<td>0.643</td>
</tr>
<tr>
<td>Scale Items</td>
<td>Shared Curriculum/Business Competency</td>
<td>Promotion</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Share food animal curriculum responsibilities with partner colleges of veterinary medicine</td>
<td>0.850</td>
<td></td>
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<tr>
<td>Have food animal students rotate among colleges of veterinary medicine to capitalize on food animal faculty expertise</td>
<td>0.772</td>
<td></td>
</tr>
<tr>
<td>Improve competency in business aspects of food animal medicine</td>
<td>0.735</td>
<td></td>
</tr>
<tr>
<td>Make food animal education more business oriented</td>
<td>0.718</td>
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</tr>
<tr>
<td>Distribute a compact disc to high-school students featuring food animal veterinary careers</td>
<td>0.833</td>
<td></td>
</tr>
<tr>
<td>Provide high school and undergraduate college students with brochures about different food animal veterinary careers</td>
<td>0.778</td>
<td></td>
</tr>
<tr>
<td>Orientation session highlighting career options in food animal veterinary fields before classes begin</td>
<td>0.716</td>
<td></td>
</tr>
<tr>
<td>Produce an Animal Planet television show about food animals to compete with “Emergency Vets”</td>
<td>0.711</td>
<td></td>
</tr>
<tr>
<td>Reserve class slots for academically qualified applicants who express a commitment to food animal veterinary medicine</td>
<td>0.758</td>
<td></td>
</tr>
<tr>
<td>Early admission decisions for academically qualified applicants who express a commitment to food animal veterinary medicine</td>
<td>0.752</td>
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</tr>
<tr>
<td>Use a gender admission process to create a more balanced male-female student ratio</td>
<td>0.713</td>
<td></td>
</tr>
<tr>
<td>Deemphasize standardized test scores and GPA for food animal admissions</td>
<td>0.688</td>
<td></td>
</tr>
<tr>
<td>Eliminate the “generalist” model of the veterinary curriculum in favor of specific tracks</td>
<td>0.827</td>
<td></td>
</tr>
<tr>
<td>Have students take two years of generalized veterinary courses and then specialize in a species track</td>
<td>0.799</td>
<td></td>
</tr>
<tr>
<td>Making students select a curriculum track that provides detailed knowledge in food animal medicine</td>
<td>0.677</td>
<td></td>
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<tr>
<td>Financial assistance in purchasing equipment to begin a food animal practice</td>
<td>0.875</td>
<td></td>
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<tr>
<td>Assistance in implementing a food animal practice</td>
<td>0.842</td>
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<tr>
<td>Variance accounted for (%)</td>
<td>15.40</td>
<td>15.13</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>2.61</td>
<td>2.57</td>
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<tr>
<td>Scale Mean Values</td>
<td>5.09</td>
<td>4.76</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>0.811</td>
<td>0.790</td>
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</tbody>
</table>