

**The UC Davis Early Bovine Experience Program  
(Formerly the UC Davis Early Dairy Experience Program)**

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## **Abstract**

This paper describes a program which seeks to proactively encourage veterinary students to enter a career path in food animal (cattle) medicine by providing them with opportunity (experience), means (scholarship funding), and mentoring. It has so far succeeded in attracting students with no prior food animal experience, and appears to be a useful model for increasing both the preparation of veterinary students and the number of students choosing food animal medicine.

Veterinary medicine historically developed as a profession largely involved with horses. As livestock rearing became more intensive, veterinarians also turned their attention to animals used to produce food and fiber in the late 19<sup>th</sup> century. In North America, states began to recognize the need to produce food animal veterinarians and initially established a number of faculty members teaching veterinary medicine (James Law at Cornell in 1868) and later established colleges of veterinary medicine, starting with Iowa State in 1877. In Canada, the Ontario Veterinary College was established in 1862, followed by the Montreal Veterinary College in 1866.

By 1900, four veterinary schools or colleges had been founded in North America, and departments of veterinary science existed at several more universities. The mostly male faculty and student body concentrated principally on horses and food animals. After World War II, a revolution occurred in small animal veterinary medicine, as the growing suburban middle class acquired dogs and cats, which were often treated as one of the members of the family. More and more veterinarians focused on small animals, and curricula gradually moved in the same direction.

The number of students choosing a career path leading to small animal practice has steadily increased. At UC Davis, 25% of seniors between 1976 to 1980 selected the small animal track. Between 2001 to 2005, seniors selected the straight small animal track at a rate of 58%. At the same time, the percentage of students selecting food animal, large animal, or the combined food animal/small animal track declined from 17% to 11%.

Today the AVMA reports that half of the 67,459 North American veterinarians are in exclusively small animal practice, and about 14% are identified as in exclusively or principally large animal practice (including equine). Only 1% of veterinarians identify themselves as exclusively practicing on cattle.

Curricula in many veterinary schools and colleges have moved toward some degree of species specialization for students in the last 2 years of the professional degree program. At UC Davis, students going into food animal mixed or food animal exclusive practice tend to come from three tracks, food animal, combined food animal/small animal, or large animal. There are 15 students in these 3 tracks combined for the class graduating in 2005, eleven in the class of 2006, and 14 in 2007. There were 12 students in these 3 tracks in 2000, and 6 in 2001, which seems to be the low point in terms of numbers of

students interested in food animal practice. The faculty expressed concern and urged the admissions committee to seek qualified students who appeared genuinely interested in a career with food animals. In 2000 we also started the Early Veterinary Student Dairy Experience Program (EVSDEP), recently broadened and now called the Early Veterinary Student Bovine Experience Program.

### **Description of the Early Veterinary Student Bovine Experience program**

The program was designed to expose first and second year veterinary students to dairy practice and then to mentoring by practicing food animal veterinarians who help direct and encourage students to think of a career in food animal practice, even if those veterinary students did not come from a rural/farm background. Dairy practice was selected because that is the area of food production which employs by far the largest number of food animal veterinarians in California, and these dairy veterinarians generate an excellent income. Role models are readily available, and they willingly mentor veterinary students. In recent years we have had several students interested in beef cattle, and so have enlarged the scope of the program to include these students.

Unless the student comes from a dairy farm or has worked on a dairy farm, she/he spends 5 to 6 weeks during the first summer in EVSDEP working on a dairy farm. Farms are selected which have been identified by their veterinarians as likely to be good for achieving a positive experience. The most important criteria in selecting a dairy are a willing and cooperative owner and herdsman and a well-run modern dairy which utilizes veterinary services.

Farms that can supply free housing to the student are also favored, although this is available on fewer than half of the dairies which have been utilized. Location near the student's hometown or near relatives or friends who can supply housing is also a criterion. We let the dairyman and herdsman know that the student is to be a worker in training, and is expected to rotate and be trained into all areas including delivering calves, calf raising, milking, feeding, treating sick cows, record keeping, preventive medical programs, and assisting the veterinarian during visits to the farm.

If a student wishes to continue in the program the following summer, she/he is placed with a dairy veterinarian(s) for mentoring. Most of the practices utilized have 3 or more food animal veterinarians. By associating with excellent practicing veterinarians who are interested in teaching students, the student develops role models and contacts with food animal practice. We want the students to picture themselves in the role of dairy veterinarian. They see the veterinarian making a very good income, enjoying the work and the clients and leading a balanced life, with time for family and activities other than work. This latter point is considered extremely important by today's students.

### **Scholarships**

The program offers a \$2500 scholarship to the student for 5 to 6 weeks of participation on a dairy or with a veterinarian. Money is raised from donors who understand the importance of interesting veterinary students in food animal careers and in training food animal veterinarians and who support the concept. **Pfizer Animal Health** is a major sponsor. The Program started with 7 students and has grown so that we are now able to support 20 veterinary student scholarships each summer.

The costs of a veterinary education have risen rapidly over the last decade, and students are often not able to take advantage of opportunities such as this unless there is some financial support. As tuition costs increase, the amount of the scholarship will also need to rise.

### **Selection of Students**

As students receive their letter of acceptance to The School of Veterinary Medicine in the Spring (usually mid April) prior to their first year, they also receive information about the program. Information and an application are on line at <http://www.vetmed.ucdavis.edu/evsdep>. The application inquires about prior experiences, future plans, and interest and availability for the coming summer. These applications are due in early May. Faculty members with food animal interests review the applications and select an appropriate number of incoming freshmen to participate during the summer before their first year in veterinary school. This obviously requires an immediate turn around, so that interested students who apply in April can be notified in May.

We have also accepted a number of students who were between the first and second or second and third years of veterinary school. It is less desirable after the second year because it is the last summer that our veterinary students are available, since they start the senior year immediately after their third year. Participating in the program for only one year means they miss the follow up mentoring of a veterinarian.

Veterinary Students who participated during the summer are given the opportunity during the following winter to indicate whether they plan to continue in the program over the next summer. If they wish to continue, acceptance is automatic, and the process of pairing them with a dairy veterinary practice begins. The number of new students accepted depends on the number of continuing students and the amount of funding available each year. Of the 39 students who have participated in the program, 29 were available (eligible) to return the next summer and 16 (55%) have returned for one or more additional summers. The other 10 students were entering the senior year and not available for the summer. Many of the students who were eligible to return for another summer in the program but chose not to, did so because they found another summer position which also dealt with food animals. Students may also skip one summer and then return to the program.

### **Acceptance and success of the program**

Comments and feedback from participating dairies, veterinarians, and students have been very positive. Some dairy owners and herdsman have been surprised at how much work it is to be training a person in many different tasks for 5 weeks, and have not been willing to take on the task again after having trained one student. Other dairymen willingly volunteer to have a veterinary student each summer. Veterinarians have been extremely pleased with the students they have interacted with in the program, and 100% want to continue as mentors. Several practices have a room for the student to live in, and students are frequently taken home for meals with the veterinarian. The veterinarians acting as mentors have been outstanding.

While the students have praised their experiences, the success of the program at interesting students in a career path involving food animals has so far been variable; the program has certainly exposed more students to dairies and dairy veterinarians, but it may be too soon to judge whether it is in fact having a positive influence on the numbers of students choosing this career path. Comments from veterinarians indicate that the experiences working on the dairy are better preparing the students to work with dairy veterinarians, and that after completing two or more summers of the program graduates will be better prepared to work in the dairy industry than students without equivalent experiences are likely to be. So while the impact of the program in terms of numbers is still unknown, the impact on preparedness to be a dairy veterinarian appears to be very positive.

The program has clearly had a positive effect on increasing diversity in food animal practice. The program has included 70% women, and many students from underrepresented minorities.

There are some wonderful examples of ways in which the EVSDEP program has influenced students. One student who grew up in Los Angeles and had never worked with cows joined the program in its first year (2000), following his sophomore year in veterinary school. It was love at first sight; he loved the cows, the people on the dairy and everything about the experience. The fact that he is bilingual and many workers on California dairies speak only Spanish, may have helped cement this bond. This individual graduated in 2002 and is working as a dairy veterinarian. The other EVSBEP student who graduated that year is in mixed practice doing roughly one half small animal and one half dairy.

Of the six EVSDEP students who graduated in 2003, two are 100% dairy practice, one is doing 40% food animal practice (mainly dairy), two are in mixed practice doing 10% to 20% food animal work, and one is 100% small animal. Five of these six students had only participated in EVSDEP for one summer.

Nine more participants graduated in 2004. Of the nine, five took positions in food animal or mixed practice, one is in equine practice, and three are in a small animal practice. The

class of 2005 had 9 students who did one or more summers with EVSBEP. Of the 6 we have current data on, one is in the military, 2 are in mixed practice, 1 is in equine practice, and 2 are in small animal practice. The class of 2006 contained 6 EVSBEP seniors who had interest in food animal practice, while the class of 2007 will have 10 EVSBEP students who are planning a career involving food animals. In addition, there are a number of students each year going into food animal practice who did not participate in the program.

### **The future**

It is clear that efforts need to continue to encourage students with food animal interests to apply to veterinary schools and colleges, to be sure that admissions committees are working toward the same goals, and to establish programs which train and mentor veterinary students toward food animal areas. In 2005 the name will change from Early Veterinary Student Dairy Experience Program to Early Veterinary Student Bovine Experience Program, in order to also include students with interests in beef cattle. Positive action and a hands-on approach are required if the profession is to serve animal agriculture. Continued funding of scholarships for the program is vital.