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21. The larger the number of cases as evidence, the greater the possibility of truth.
22. Every statement, opinion or idea rests upon some assumption, and is no more solid than its assumption.
23. The hypothesis, the theory, the law, and the axiom indicate degree of certainty.

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OPPORTUNITIES FOR EDUCATION IN VETERINARY MEDICINE

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We are receiving many inquiries regarding entrance requirements and opportunities in veterinary medicine. A School of Veterinary Medicine, as you know, was established at the University by the Legislature in 1947, and has been in operation since that time.

This presentation will attempt to summarize material relative to present needs for veterinarians, high-school and college entrance requirements, other requirements for entrance, and the general nature of the professional curriculum.

Present Needs for Veterinarians

The need for veterinarians is acute and is continuing to increase.

Allow me to illustrate. In the years 1908-18, there were about 725 veterinary graduates per year. These were largely graduates of privately supported schools. During the early 20's these privately-supported institutions experienced curtailment of their programs due to lack of funds. Thus, by 1925-26, only about 100 were graduated per year.

Subsequently, veterinary medical education in publicly-supported institutions increased. By 1936, however, the existing schools could accept only a portion of the qualified applicants, and this situation has continued to the present time.

In 1950 there were 575 graduates in veterinary medicine throughout the United States. Seven new schools have opened. When all of these are in full operation, the output will reach 825-850 per year. Thus we will not much more than replace the graduates of the 1908-18 era, who are now growing too old to maintain active practices. This situation will obtain in essence for the next 10 years.

Consequently, from 1918 to 1951, a 33-year period, the number of practicing veterinarians has remained essentially static and will probably remain so for another 10 years. Over the 33-year period mentioned, there has been a constant improvement in services rendered and a constant increase in demand for qualified veterinary

service. Only through increased numbers of veterinarians can the demand be met.

Cogent evidence of the need for increased veterinary service in Minnesota is supplied by disease-loss statistics. Of the estimated \$23,000,000 annual loss suffered by Minnesota farmers due to animal disease, \$3,000,000 per year is lost through the lowered milk production and calf crop, the infertility and retained placenta associated with brucellosis (Bang's disease). Another \$5,000,000 per year is lost from swine diseases, such as hog cholera, enteritis, erysipelas and baby pig losses. Forty per cent of the baby pigs born in Minnesota never reach market age. The annual loss to Minnesota dairy farmers due to mastitis or garget is estimated at \$2,000,000. Losses from parasitism in all domestic specials in this state approximate \$12,000,000 per year.

This all boils down to the fact that an adequate animal disease prevention program could save Minnesota farmers an average of \$117 per year per farmer. Such a prevention and control program is manifestly impossible when each of the 409 veterinarians now practicing in this state would be required to care for 505 farms. That is, each of the veterinarians, one-third of whom are over age 52, would be required to care for 6,000 dairy cattle, 3,000 beef cattle, 13,000 swine, 3,000 sheep, 1,000 horses and 65,000 turkeys and chickens.

Needless to say, in view of the statements made regarding animal disease losses, there are many opportunities available in practice, particularly serving rural areas.

In addition, the United States Department of Agriculture offers attractive positions in food inspection and disease control work. U.S. Army veterinarians are engaged in the public health aspects of the Army's food supply. Concerns manufacturing drugs and biological products such as serums and vaccines employ a large number of veterinarians.

Municipal milk and meat inspection services are also rendered by veterinarians to city boards of health.

Entrance Requirements

High-school curricula preparatory for a career in veterinary medicine require a major in English and a minor in mathematics, with suggested additional minors in natural sciences and foreign languages.

College preveterinary requirements include 90 credits in chemistry, physics, mathematics, zoology, English, animal husbandry and social sciences.

For consideration, an applicant must have an honor point ratio of 1.5 or above, that is, midway between a B and a C. He must also present evidence of farm experience and recommendations regarding his qualities of leadership and character. Further, he may be

required to present the results of aptitude tests administered by the University testing bureau.

Professional Curriculum

In the four years in the professional curriculum, the student takes two pre-clinical years, consisting of courses in gross and microscopic anatomy, embryology, physiological chemistry, physiology, general and pathogenic bacteriology, pathology and parasitology. During the last two or clinical years, the student spends at least three hours per day in the ambulatory clinic (which services farms within a radius of about 25 miles), the large animal medical and surgical clinics, the small animal clinic, and in the several clinical laboratories. Courses taken in the clinical years include pharmacology, obstetrics, surgery, radiology, public health, sporadic and infectious diseases of large and small animals, milk and meat hygiene, diseases of poultry, and diseases caused by poisonous plants.

The Problem Stated

It is in the domain of the secondary school teachers that students showing aptitude for a professional career may be best counselled. Young men and women of good scholastic ability who appear scientifically inclined, and who like animals would do well to consider the advantages of veterinary medicine. The degree of personal satisfaction in point of service rendered is no small part of the reward of the veterinarian. No less is that of the constant stimulus of new challenges, new disease agents and methods of diagnosis and control. The veterinarian must be one who likes living in small communities and likes being outdoors much of the time.

We should like to suggest, in conclusion, that when a student is considering veterinary medicine as a career, he be advised that it would be well worth his while to get a closer look, that he come here and see the students and staff at work. We shall be glad to meet him and his family and do our best to present the various aspects of veterinary medicine as a career.

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PRINCIPLES AND EXPERIMENTS DESIRABLE FOR A COURSE IN GENERAL SCIENCE AT THE JUNIOR HIGH SCHOOL LEVEL

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The purpose of the investigation was to determine the relative values of the principles desirable in a general science course and