Department of Medicine

Lyle Swain
Iowa State College
ORD BRYCE once said, "Medicine is the only profession that labours incessantly to destroy the reason for its existence." Today that statement is still true. As long as there are diseases, there will still be men devoting their lives to oppose them. The Department of Medicine, Division of Veterinary Medicine, at Iowa State College is an important link in the chain which is shackling those diseases.

The Veterinary Division was divided into departments in the school year of 1912-1913. The medicine department, which included the ambulatory clinic, was first organized as the Department of Theory and Practice of Veterinary Medicine with Dean C. H. Stange as its head. It remained as such until the year 1919-1920 when it became known as the Department of Medicine. In repeated reorganizations of the division, the ambulatory clinic, because of its nature, has necessarily been included in the Department of Surgery as well as in the Department of Medicine. Dr. C. H. Covault succeeded Dean Stange as head of the medicine department in 1930.

Curriculum

The curriculum includes courses in the sporadic diseases of the large animals, a course in the diseases of small animals, and clinical laboratories for both large and small animals. Prior to 1930, courses in infectious diseases were also included in the curriculum. When the Department of Hygiene was created in 1930, the study of infectious diseases logically was included in that department.

The courses in sporadic diseases offer excellent opportunity for the study of diseases of large animals which do not appear in the epizootic form. These diseases are studied with reference to etiology, symptomatology, pathology, diagnosis, and treatment. Because of its importance, clinical diagnosis is given special emphasis by providing several laboratories in which both the general and the special examination of the patient are studied. All these courses are offered to third year students.

Small Animals

The study of the diseases of small animals is made during one quarter of the junior year. The most important diseases of the dog and cat are considered. As far as possible, actual clinical cases are used to supplement the classroom discussions. Clinical laboratories provide practical experience for both juniors and seniors in diagnosis, symptomatology, and treatment of diseases of both large and small animals. Actual cases are assigned to each senior every week. The seniors, with the aid of the juniors as assistants, are responsible for the care of their assigned patient for the week. Medicinal therapy is prescribed by the doctor in charge. If surgery is necessary, the students prepare the patient and assist during the operation. In the handling of all the cases, the students are urged to consider each case in all its aspects.

Since there are no practicing veterin-
rians in Ames, many local calls are referred to the ambulatory clinic. Each week four different senior students accompany Dr. W. H. Chivers out to the farms to care for cases. In this way, students have an opportunity to see the principles learned in the classroom put into practice.

The Staff

The staff of the Department of Medicine includes the following:

Dwight A. Smith, D.V.M., assistant professor of veterinary medicine.
G. W. Cornwell, D.V.M., assistant, veterinary clinics.

C. H. Covault, D.V.M.

Dr. Covault was born in Troy, Ohio. He graduated from The Ohio State University in 1910, receiving the degree of Doctor of Veterinary Medicine. Following graduation, Dr. Covault engaged in private practice in Springfield, Ohio. However, he soon moved to Akron, Ohio, and became associated with Drs. Case and Planz in the same type of work. Here, with the exception of part of the years 1913-14, when he performed special services for the Bureau of Animal Industry of the Agriculture Commission of Ohio, he remained in practice until 1917.

In the fall of 1917, Dr. Covault came to Iowa State College as Assistant Professor of Veterinary Medicine. In 1920 he was made Associate Professor of Veterinary Medicine, in which capacity he remained until 1930, when he was made professor and head of the department.

The duties of Dr. Covault are as innumerable as they are diversified. As director of both the large and small animal clinics, he is responsible for the welfare of many animals, and indirectly, for the knowledge the students gain from working with these animals as well. Besides these duties, he teaches the courses in large animal diseases. Then as counselor for all junior and senior students, Dr. Covault gives freely of his time and experience to assist the students in their many and varied problems.

Dr. Covault is a member of three honor societies: Phi ZetaPhi, Phi Kappa Phi, and Gamma Sigma Delta. He is also a member of the American Veterinary Medical Association, the Iowa State Veterinary Medical Association, and the Ames Kiwanis Club.

W. H. Chivers, D.V.M.

Dr. Chivers was born in St. Joseph, Missouri. After receiving his degree from Iowa State College in 1928, he served on the staff as an assistant in the large animal clinic for a year. From 1929 to 1939 he was engaged in general practice at Manson, Iowa. In 1939 he came back to Iowa State as Assistant Professor of Veterinary Clinics, in charge of the ambulatory clinic. Dr. Chivers is a member of Phi Kappa Phi, Gamma Sigma Delta, and

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health of animals used for feed trials, and is, furthermore, well prepared to accurately determine the various types of nutritional deficiencies that may show up on nutritionally inadequate feeds.

All of us realize the necessity of supplying housed poultry with an adequate, balanced ration. All essential nutrients must be supplied. Dogs, as well as foxes, mink, hogs, and even large roughage consuming animals (cattle and horses), fed exclusively on commercial feeds must in most cases be supplied with specially balanced nutritious feeds. Dog food must contain adequate vitamin D to prevent rickets. The Great Dane puppy requires ten times the amount of vitamin D per pound of body weight that the terrier does. Vitamin A must be provided foxes and mink. Iodine must be present in the feeds of all domestic animals on the Pacific Coast and in the Great Lakes region. Extra iron must be provided in some areas, and even cobalt in some. The proper amount of manganese must be present in poultry starter feeds.

Present Problems

In addition to the gradual accumulation of nutritional knowledge that must be incorporated into commercial feed operations, present Government restrictions, unavailability, and high prices have made it necessary for new products to be tried out. Some of these problems are as follows:

1. The Federal Government has recently put a limit on the amount of vitamin A as found in fish oils in livestock feeds. Artificially dried grasses are a good source of carotene, the precursor of vitamin A, but carnivora do not relish dried grasses in their feed. Palatability is an important factor in commercial feeds as it is in all feeds.

2. The rapid rise in price of powdered milk has made its use prohibitive in some feeds. Milk has been used extensively in poultry starter and breeder feeds, and in dog, mink, and calf feeds. The protein and minerals in milk have high nutritional ratings; but it was for the vitamin B fractions, riboflavin, and to some extent other B fractions that in the past has made powdered milk practically indispensable in many feeds.

During the past two years, feed research at the Albers Research Station has made available lower priced sources of the vitamin B fractions for use in poultry, dog, and calf rations, has proved the nutritional adequacy of valuable low priced sources of vitamin D, and has discovered valuable protein substitutes through the combination and balance of essential amino acids from various sources.

The present wide-awake commercial feed concern is very much aware of the importance of the vital nutritional factors in feeds for livestock, and is bending every effort to make feeds that are superior. Such a concern is also endeavoring to supply the essential nutrients from sources that will allow competitive prices and at the same time that will effect savings for the feeder of domestic animals. More veterinarians should have the opportunity to observe the exhaustive tests that are conducted on feed ingredients (moisture, proteins, minerals, vitamins, and fiber) by commercial concerns in order that they may be blended into a balanced diet for the purpose and species intended.

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the American Veterinary Medical Association.

Dr. Cornwell was born near Ankeny, Iowa. Immediately after Iowa State awarded him his degree in veterinary medicine, he began work as an assistant in the small animal clinic. Dr. Cornwell is a member of Gamma Sigma Delta, Phi Zeta, and the American Veterinary Medical Association.

The Veterinary Student