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New Poultry Laboratory

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Animal Crackers



Rabies Vaccination Important for Dogs and Cats

There has been a dramatic increase in the number of rabies cases reported, particularly in Pennsylvania, Maryland, and the District of Columbia. The cause appears to be an outbreak of the disease in raccoons, with subsequent spillover to skunks, foxes, horses, dogs, and cats. In contrast, the number of cases in bats has remained relatively constant.

Cats are particularly at risk because of their free-roaming nature and hunting instincts. However, there are estimates that only about four percent of the approximately 53 million cats in the United States are vaccinated against rabies. The result is that for the past few years, there has been a higher frequency of rabies in cats than in dogs.

Dogs and cats should be vaccinated against rabies. Killed vaccines which give protection for three years are available. If one of these vaccines is used, cats and dogs should be vaccinated at three months and one year of age, then every three years. Be sure to have your veterinarian check the manufacturer's recommendation, as some vaccines give protection for less than three years.

At the present time, there is no approved method for vaccinating wild animals against rabies, although researchers are working to develop techniques, including an oral vaccine.



Class of 1990

The School of Veterinary Medicine, University of Pennsylvania, accepted 109 students for the first year class entering in September and graduating in 1990. There are 75 women and 34 men in the class. Of these, 72 come from Pennsylvania, and 28 from the states with contracts for admission of residents (15 from New Jersey, five from Maryland, three from Delaware, two from Connecticut, two from Vermont, and one from New Hampshire). There is one contract student from Puerto Rico. The other out-of-state students are: three from New York, one from Massachusetts, one from Michigan, and one from Texas. There are two foreign students—one from England and one from Singapore.

The minimum educational requirement for admission is three years in a college or university accredited by the Association of American Colleges and Universities or one of the regional accrediting associations. Required courses include English, Physics, General and Organic Chemistry, Biology or Zoology, Genetics, Social Sciences or Humanities, or Calculus. The scores obtained on the Graduate Record Examination Aptitude Test (GRE) must be submitted.

Application forms are distributed after July 1st and must be received by November 15th for the class entering in September of the following year. Further information may be obtained from the School of Veterinary Medicine, 3800 Spruce Street, Philadelphia, PA 19104.

Although there have been reports of a surplus of veterinarians, nearly 85 percent of recent graduates have entered some form of clinical practice. A number of nonpractic positions are available. There are public health positions in federal, state, and municipal governments. The Army veterinarians are also involved in public health work and some care for Army dogs and horses. Aquatic animal medicine is another field, and veterinarians also work with laboratory and zoo animals.



Growth Rate of Puppies

A steady weight gain is an important indicator of a puppy's good health. Puppies should gain weight the first day of life and continue to gain daily. The birth weight usually doubles within 7-10 days, and most reach 50 percent of their mature weight by four months. At about one year of age, most breeds reach their adult weight. Giant breeds such as Great Danes continue to grow until about 18 months of age and do not reach their mature weight until about two years of age.

A good management practice is to weigh pups at birth, daily for the first two weeks of life and then every three days until a month old, with periodic weight checks thereafter. A gram scale should be used. You should know the adult weight for the breed. The

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Construction of the Evan L. Stubbs Building at New Bolton Center will begin shortly. Named for the 1911 graduate, a pioneer in the study of avian infectious diseases, the new structure will house a sophisticated laboratory. "The Evan L. Stubbs Building is designed to safely deal with and manage research with infectious organisms, primarily of poultry," said Dr. Robert J. Eckroade, associate professor of poultry pathology and director of the poultry pathology laboratory at New Bolton Center. "Funding has been provided by the Commonwealth of Pennsylvania. Our primary task is to study avian influenza, a disease which has dealt devastating losses to Pennsylvania's poultry industry."

The new 43- by 65-foot one-story structure will have an impressive array of safeguards. "It will have two air handling systems, and in each the air will be filtered to remove all organisms, including any virus," Dr. Eckroade said. "It will be a very limited-access building with air locks, shower areas, one-way air flow, a special pathological incinerator, and a chemical treatment retention tank for effluent waste."

All these precautions are necessary, as the researchers will be dealing with infectious organisms pathogenic for food animals. "The building is primar-



ily for avian influenza research," said Dr. Eckroade. "This disease is devastating to the poultry industry, and while a lot is known about the influenza virus, we know very little about the disease it causes in poultry."

He explained that the avian influenza virus is present in wild migratory waterfowl and that it is quite resistant. "During the winter in Pennsylvania it can survive for about 105 days in the manure from infected birds." Pennsylvania took drastic measures to curtail the spread of the disease. Millions of chickens were depopulated before the disease was eradicated. However, there was another outbreak of a mild form of the disease on a Pennsylvania farm in early 1986.

The source of this outbreak was traced to trucks with dirty coops originating from the live bird, street markets system. "There is a large market for live chickens in New York City and other large cities," said Dr. Eckroade. "80,000 live birds are sold weekly in New York alone through about 40 street markets." He explained that suppliers for this market travel by truck from farm to farm to buy small flocks of

chickens. "It was found that these trucks were not cleaned and disinfected after each trip, thus it was possible for the virus to be introduced to the Pennsylvania farm." According to Dr. Eckroade, legislators are considering regulations making mandatory the cleaning and disinfecting of vehicles used for poultry transport.

The researchers at New Bolton Center will study the avian influenza virus infection of poultry, pheasants, turkeys, and ducks. The influenza research team at the University of Pennsylvania School of Veterinary Medicine includes Drs. Helen M. Acland, Charles Benson, Shennil Davison, Robert Eckroade, Linda Keller, and Ben Wolf. The Evan L. Stubbs Building will be part of the Cooperative Poultry Diagnostic Laboratory at New Bolton Center.

—H.W.

Second Century Fund

Gifts, subscription and bequests to the Second Century Fund now total \$26.6-million. During the last six months approximately 160 separate gifts have been recorded, ranging from \$10 to the clinical research fund from grateful pet owners to the completion of the endowment of one of the chairs in medicine.