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## Curriculum Changes

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# Curriculum Changes

## Revision of educational program outlined

*H. D. Bergman, D.V.M.\**

SOME three years ago, President Friley requested that all divisions of Iowa State College begin a special study of their respective curricula with the view to making any changes that might seem justified in better attaining their objectives.

In keeping with this general policy, the Curriculum Committee of the Veterinary Division began a detailed study of the various fundamental and clinical courses. Consideration was also given to the possible expansion of some of the present required courses and the addition of new ones to be offered either by the veterinary departments or by other divisions of the college. In the detailed study of the curriculum in all its aspects, the question of expanding the present 5 year curriculum to 6 years was carefully considered. Here is involved the frequently debated question as to whether the additional year should be added to the pre-professional educational requirement or the present 4 year professional curriculum be expanded to 5 years. While the future expansion of the educational requirements of veterinary education is being seriously considered by educators, the Curriculum Committee concentrated its efforts on the immediate problem of revision of the present educational program



Dean Bergman

with the view to possible improvement.

In March, 1943, a formal report was presented to the veterinary faculty, which, after careful study and minor changes, was adopted and submitted to the General Curriculum Committee of the college for consideration and recommendation to the general faculty. Following approval by the general faculty, the revised curriculum was put into effect in the summer

quarter of 1943 for the first and second year classes, while the third and fourth year classes were to continue to graduation under the old curriculum.

Preliminary to the development of a properly balanced curriculum, the committee undertook to outline its principal objectives in training men for veterinary medicine. It was the opinion of the committee that the principal function of the veterinary curriculum is to train students for the following general professional responsibilities, and that the courses of the 4 year professional curriculum should be so outlined and arranged as to meet these objectives.

The objectives of the curriculum are:

1. To recognize, prevent, and treat, in the capacity of practitioners, the various diseases of food-producing, work, pet, fur-bearing, and sporting animals.
2. In the capacity of municipal, state, or federal veterinarians, to prevent, con-

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trol, and eradicate infectious and parasitic diseases of all domestic animals.

3. To act as civil and military officials in the maintenance of a healthful supply of food products.

4. To be technicians, advisors, or administrators in programs for the prevention and control of diseases of animals transmissible to man.

5. To serve as advisors to livestock producers in matters pertaining to animal health and management.

6. To supervise the production of biologics and drugs used in the diagnosis and treatment of disease.

7. To investigate the cause and nature of animal diseases and discover means for their treatment, prevention, control, and eradication.

8. To assist those persons or agencies working in the broad field of public health.

### **Major Changes**

The major changes made in the curriculum so as to better meet the objectives listed will be briefly outlined with the reasons for the changes.

#### *Preveterinary and Freshman Years*

No changes were made in the pre-professional year or in the first year of the professional curriculum. If two years of preveterinary education should be required at some future time, rearrangement of the courses given in the freshman year will be necessary.

#### *Sophomore Year*

Several changes were made in the second year. Botany 456, the course in poisonous plants, was transferred from the senior year to the sophomore year. This is a preclinical subject which should closely follow general botany and prepare the student for his clinical subjects. Since the discussion of poisonous plants is presented by botanists, knowledge of clinical medicine is not essential for its study. The course in animal parasites, Veterinary Pathology 354, was changed from the junior year to the sophomore year, increased by one credit, and divided into two courses, 255 and 256, given in the fifth and sixth quarters of the curriculum.

The study of animal parasites properly belongs in the preclinical years the same as do bacteriology, poisonous plants, and pathology, all of which are subjects concerned either entirely or in part with the causes of disease.

#### *Junior Year*

In order to make possible the transfer of parasitology to the second year, the courses in pharmacology and therapeutics, Veterinary Physiology 267, 367, 368, and 369, were arranged to begin in the last quarter of the second year and continue throughout the third year. The total credit hours of these courses were changed from 9 hours to 12. This change was considered advisable as it makes possible a better coordination of the courses in therapeutics with the clinical courses.

In addition to the above changes, no credit hours will be given for Clinics during the junior year, although grades will be given as in the past. The junior student will apply himself in clinical laboratories without the stimulus of earning credits. Interest in the practical application of the professional subjects he came to college to study is incentive enough. However, a grade does indicate the degree of approval the instructor places upon his clinical work. The elimination of clinic credit hours in the junior year makes it possible to increase the actual amount of clinical work required of the juniors. This may tend to avert the tendency toward scholastic slump commonly noticed in students upon entering the clinical years. The course in small animal medicine, Veterinary Medicine 336, was decreased from 5 to 4 credits and a course, 337, dealing with surgical diseases of small animals, was added. A course in animal genetics, Genetics 301, is also now required in the last quarter of the junior year. This is a special course for veterinary students in which the principles of genetics are first considered and then applied to the breeding of animals.

#### *Senior Year*

Several important curricular changes were made in the senior year. The courses

*(Continued on page 164)*

tity selection for characteristics where the fate of the individual is much affected by things other than heredity. The selection of poultry breeding stock for family viability without a significant loss in the producing capacities of these birds gives ample reason for optimism, especially since present experiments show that the most viable birds are actually the highest producers. This gives more surviving birds to cull for other characteristics on which the financial state of the owner may more directly depend. Purebred Hereford cattle have a tendency toward cancer eye, so why not breed it out? That this is a possibility is shown by the Zebus which are resistant to it. Zebus are also but slightly affected by Texas fever, and it is thought that the Santa Gertrudis breed, whose ancestry is about  $\frac{3}{8}$  Zebu, is resistant in some degree. The same has been reported for damage done to these cattle by warbles and flies. Does this not point to fixing of resistant qualities and their subsequent spread through our livestock?

Currently the challenge is whether animal husbandrymen, pathologists, geneticists, and veterinarians can adapt their expanding knowledge of the field into a fertile source of disease resistant stock. This challenge is being met because it is the ambition of all of them to gradually eliminate disease or at least limit it as one of the vicissitudes of livestock raising. Genetic resistance is the final resort for those diseases that cannot be controlled through the cheaper means of vaccination and sanitation. When one of these 2 methods becomes established in controlling any disease, breeding against it usually will cease to be profitable.

#### **Role of Veterinarian**

If this field of activity becomes widespread there will be increasing need for more veterinarians to help with the diagnosis, with seeing that the test animals get a uniform exposure, and (if they ground themselves well enough in genetics) with summarizing and appraising the differences between families in disease resistance so that the actual selection and culling of families may be most effective.

Provided that it can be done, this seems one of the most logical and practicable of the means available to proceed with eradicating disease and ridding ourselves of the recurrent annual cost of heavy livestock losses. The veterinarian must be cognizant of its value in controlling these plagues because it is now entering the realm of the practical.

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## **CURRICULUM**

*(Continued from page 129)*

in infectious diseases, Veterinary Hygiene 421, 422, and 423, will cover all 3 quarters, replacing the old courses, Infectious Diseases 421, Immunology 429, and General Hygiene and Epidemiology 422. It is considered more effective to cover all these subjects in relation to a single disease rather than to do it piecemeal in different quarters as heretofore. Veterinary Obstetrics 444 will be outlined to comprise a study of both infectious and non-infectious diseases of the generative organs of domestic animals, including related endocrine disturbances which impair reproduction. Special consideration will also be given to diseases of the newborn and the practice of artificial insemination. A new course in advanced animal nutrition, Animal Husbandry 518, is now required in the senior year. This course

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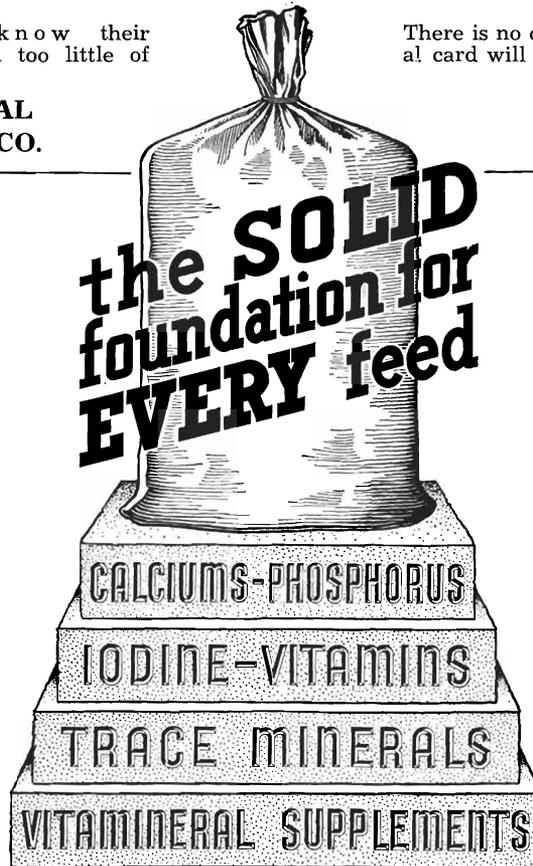
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will follow feeds and feeding, Animal Husbandry 416, and will include fundamental knowledge relative to growth, reproductive, and comparative biochemistry and physiology which comprise the modern science of nutrition of the domestic animals. Reference has already been made to the transfer of the course in poisonous plants back to the second year.

### Clinical Conferences

Another significant change in the senior year is the introduction of clinical conferences as a course, Veterinary Medicine 484. This course will alternate with dairy hygiene, Veterinary Hygiene 420, and the course in diseases of reproduction and of the newborn, Veterinary Obstetrics 444. This will mean that one-third of the seniors each quarter will spend 2 afternoons per week in clinical conferences. At these conferences, selected large and small animal cases will be exhibited, examined, diagnoses made, and treatment prescribed. Both faculty and students will actively participate, and fundamental facts, insofar as they relate to the case, will be appropriately reviewed. Staff members from the basic departments of anatomy, physiology, pathology, and hygiene will participate in these clinic conferences.

Other changes for the senior year include a new course given in the Economics Department, Economics 365, which will embody many of the legal phases of veterinary medicine and will parallel the similar courses given in medical schools called medical jurisprudence.

The course in meats and meat products, Animal Husbandry 476, which has previously been elected by many of the veterinary students, is now a required course in the senior year preceding the course in meat hygiene, Veterinary Hygiene 426. Increased emphasis in Federal meat inspection regulations and in the duties of the Army Veterinary Corps on carcass grading and inspection of meat products, makes this addition important.

While the curricular changes made are not especially numerous, a careful study of them will show that they are of definite significance. They will aid in the

better accomplishment of the objectives of the curriculum—which is to train our Iowa State veterinary graduates so that they may continue to creditably meet their professional responsibilities in the rapidly expanding fields of veterinary science.

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## ALUMNI NEWS

*(Continued from page 150)*

Pvt. Donn E. Bacon, '40, has been drafted into the army and is reported at Camp Hale, Colo.

Pvt. Merrill H. Wallinga, '42, was last known to be located at Mason City, Iowa.

Pvt. Harry O. Heddens, '40, formerly at Wellsburg, Iowa, is now in the army.

Lt. R. L. West, '36, V. C., is with the 3rd Med. Sqn., A. P. O. 435, Ft. Clark, Texas.

Major Lloyd C. Tekse, '33, is with the 37th Vet. Co., Camp Hale, Colo.

Lt. E. D. Simonson, '40, of Cherokee, Iowa, is with the armed forces in Australia.

Lt. C. F. Dykstra, '43, is with the San Antonio Army Service Forces Depot in Texas.

Lt. Harold E. Held, '42, Headquarters District No. 3, Sixth Service Comm., Room 1714, Civic Opera Bldg., Chicago 6, Ill.

Lt. James L. Welch, '41, and Lt. L. J. Rafoth, '43, were stationed with the Veterinary Corps at Ft. Snelling, Minn. Capt. L. A. Osborn, '38, received his promotion