

ANIMAL NUTRITION

Good Health for Dogs

► DOG OWNERS can improve the health of their pets by feeding them canned dog foods that have the inspection seal of the U. S. Department of Agriculture.

The seal means that all the ingredients of the food have been inspected to maintain high standards. The Department also runs three-month feeding tests with adult dogs to guarantee the quality of the food.

This is a government service that does not cost the taxpayer a dime, since the manufacturers pay the costs of inspection and testing. Only 19 of the nation's dog food plants have asked for the service.

Dr. D. W. Glascock, in charge of animal-foods inspection, said that inspectors check plant and equipment cleanliness, food quality and content, container processing and accuracy of labels. This protects dogs from foods that are "mere belly-fillers" without enough nutrients to keep them healthy.

Dogs approve the Department's requirement of 30% meat or meat byproducts. Meat byproducts are such parts as liver, stomach and kidneys. Meat meal or scrap made from animal carcasses condemned for human consumption cannot be put into pet

food approved by the Department. The dog food must also contain minimum amounts of proteins, vitamins and other nutrients.

The three-month feeding tests are conducted by Dr. I. P. Earle at the Beltsville, Md., Agricultural Research Center of the Department. They show how much of any food is required to keep an adult dog in good health. Foods with the same percentage combination of nutrients may vary greatly in the amount needed for health.

Quality of nutrients, and particularly proteins, has a decided effect on the amount of food that must be given an animal. Dr. Earle pointed out that protein quality is determined by "10 essential amino acids." Poor quality proteins are lacking in one or more of the acids.

Dogs may require twice as much of a food with poor quality proteins as one with good quality.

Regular meat inspectors do the work of inspection in the plants. The manufacturers pay for the service on an hourly basis that covers all expenses of administration, testing and inspection, Dr. Glascock said.

Science News Letter, February 13, 1954

MEDICINE

Polio Vaccine Trial

► POSTPONEMENT OF polio vaccine trials to late March or April, instead of the February date originally scheduled by the National Foundation for Infantile Paralysis, means that children in southern states probably will not be included in the trials this year. (See SNL, Feb. 6, p. 83.)

Polio starts its upswing in the far south as early as April, and usually is well on the increase in southern states by May or June. A vaccine to be effective against the disease should be given a few weeks before any exposure to the disease. This is necessary to allow time for the vaccine to stimulate development of antibodies to the disease.

Delay in the start of the vaccine trials is reported due to production problems that could not be solved in time for the February starting date. Even with these solved, there will be a lag of at least five weeks on each batch of vaccine while safety trials are being run. These include tests on monkeys.

After being given the vaccine, the monkeys are observed for four weeks to see whether they develop any signs of polio. Then they are sacrificed and their body tissues carefully examined, which may take another week or perhaps two.

Meanwhile some health and medical authorities continue unofficially to criticize the entire vaccine trial program on the basis that there are not enough scientific controls set up for the trials on which the value of

the vaccine can be judged. The only controls planned now are the unvaccinated first and third grade children in the same schools where second graders get the vaccine.

It is also pointed out that, even during an epidemic, only about one in every thousand children exposed to virulent polio virus gets the disease in a form that can be recognized. Tests run by Dr. Jonas Salk of Pittsburgh, whose vaccine will be used, have not yet been made on as many as 5,000. Some authorities claim these preliminary trials should have been made on 20, 30 or even 50 thousand in order to give information on the effectiveness of the vaccine.

The delay in starting the trials may give time to answer the critics or it may give time for the criticism to become more outspoken.

Science News Letter, February 13, 1954

BIOCHEMISTRY

Factor in Liver Speeds Cancer Growth

► SOME GROWTH factor produced by the liver as it regenerates can speed the growth of cancer, Drs. Karl E. Paschkis, Abraham Cantarow and J. Stasney of Jefferson Medical College, Philadelphia, have discovered.

Scientists elsewhere have offered the emaciation of cancer patients and other evidence as proof of a hypothesis that as can-

cer grows it draws its protein materials from the body's normal tissues.

The Jefferson team tested this theory by removing two-thirds of the livers of rats when they transplanted cancers to the animals. If the theory were correct, the liver might repair itself more slowly than usual.

The livers of the animals, after about 48 hours of quiescence, began growing with a great spurt, and they regenerated completely at the normal rate. But this did not slow down the growth of the cancer.

In two kinds, one of the liver and another of the connective tissue, cancer growth was more rapid than ever. Their work is supported by the American Cancer Society.

Science News Letter, February 13, 1954

SCIENCE NEWS LETTER

VOL. 65 FEBRUARY 13, 1954 NO. 7

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C., North 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright, 1954, by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service. Science Service also publishes CHEMISTRY (monthly) and THINGS of Science (monthly).

Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283), authorized February 28, 1950. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to Periodical Literature, Abridged Guide, and the Engineering Index.



Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 1 E. 54th St., New York 22, Eldorado 5-5666, and 360 N. Michigan Ave., Chicago 11, State 2-4822.

SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Ferdinandus Payne, National Science Foundation; Karl Lark-Horowitz, Purdue University; Kirtley F. Mather, Harvard University. Nominated by the National Academy of Sciences: Harlow Shapley, Harvard College Observatory; Homer W. Smith, New York University. Nominated by the National Research Council: Leonard Carmichael, Smithsonian Institution; Ross G. Harrison, Yale University; Duane Roller, American Association for the Advancement of Science. Nominated by the Journalistic Profession: A. H. Kirchofer, Buffalo Evening News; Neil H. Swanson, Baltimore Sun Papers; O. W. Riegel, Lee Memorial Journalism Foundation. Nominated by the E. W. Scripps Estate: John T. O'Rourke, Washington Daily News; Charles E. Scripps, E. W. Scripps Trust; Edward J. Meeman, Memphis Press-Scimitar.

Officers—President: Harlow Shapley; Vice President and Chairman of Executive Committee: Leonard Carmichael; Treasurer: O. W. Riegel; Secretary: Watson Davis.

Staff—Director: Watson Davis. Writers: Jane Stafford, Marjorie Van de Water, Ann Ewing, Allen Long, Clare Cotton. Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Sales and Advertising: Hallie Jenkins. Production: Priscilla Howe. Interlingua Division in New York: Alexander Gode, Hugh E. Blair, 80 E. 11th St., GRamercy 3-5410.