INFORMATION REPORT

ANIMAL WELFARE INSTITUTE

350 FIFTH AVENUE, NEW YORK 1, N. Y.

January-February, 1953 Vol. 2 No. 1

IMPORTANT NEW USE FOR ANESTHESIA

The most important new development for the prevention of cruelty to animals in the United States in 1952 took place in Austin, Minnesota at the George A. Hormel packing plant. Ten thousand hogs are received daily at this plant, and all of them are now anesthetized prior to slaughter. Pain and fear are eliminated and, at the same time, the efficiency of the operation is increased through the use of an ingenious device described by L.W. Murphy in the paper reprinted below. It was presented at the annual convention of the American Meat Institute. The diagram shows how the apparatus is constructed.

John C. Macfarlane, Director of Livestock Loss Prevention for the Massachusetts SPCA, and one of the most experienced and able protectors of livestock in the United States, had this to say about his visit to Austin: "For the first time in over a quarter of a century, I was able to stand on the killing floor of Hormel's very clean plant in Austin, Minnesota and observe several hundred hogs prepared for slaughter without any qualms whatsoever....The hog is no longer hoisted while kicking and twisting to arrive at another level excited and exhausted, subjected to great physical pain and often arriving with damaged hams...When you buy pork products from the Hormel Packing Plant at Austin, Minnesota, you can be assured from now on that the animals were rendered completely unconscious, that there was absolutely no pain and no suffering, and that from the moment they were anesthetized to the very end, they never once regained consciousness."

The Animal Welfare Institute urges readers of the Information Report to give these facts to their local meat markets, and to show their approval by purchasing Hormel pork products.

Text of Address by L. W. Murphy, Service Division
George A. Hormel & Co.

The new method of hanging hogs is the result of considerable research, long study and as always much trial and error.

The project started simply enough. Some one suggested the need for improved working conditions and economies in the operation prior to scalding.

Unfortunately for those of us who had to come up with the solution the suggestion came from H. H. Corey* so immediate action was deemed advisable.

Indeed, our entire management realized that the cost of shackling was high; that shackling was a rough job for man and hog; that it was noisy and dirty, and in some degree dangerous and that it probably involved operative losses.

As we all know, consistently good sticking is difficult to accomplish with an active hog threshing about suspended on a chain. Ever present is the possibility of harm to meat from overheating a hog and a shock condition caused by climbing a ramp and resisting the drag of the shackling chain.

We needed an immobile hog. Anesthesia was the answer. It may be relevant to say that the discovery and successful use of anesthesia in humans, with the surgeon operating on a quiet and unconscious patient, has been called the greatest advance in the history of the human race.

At the least, there is a parallel in our method, in the opportunity provided the operator of the knife to do his work better.

At first we tried various methods to improve shackling, working with the fully conscious hog. All of these methods were less than satisfactory. We began to make real progress when we tried anesthesia.

We built a good-sized pilot plant and fully tested various kinds of gas that would put a hog under, but not out. We were entirely successful with CO_2, Carbon Dioxide, converted, in our case, from dry ice.

* *H.H. Corey, President, Geo. A. Hormel & Co.*

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We found that we could get complete immobility and insensitivity, with a moderate inhalation, lasting from 40 to 50 seconds. We found also that we could fix the amount of gas inhaled and the duration of its effect within quite narrow limits.**

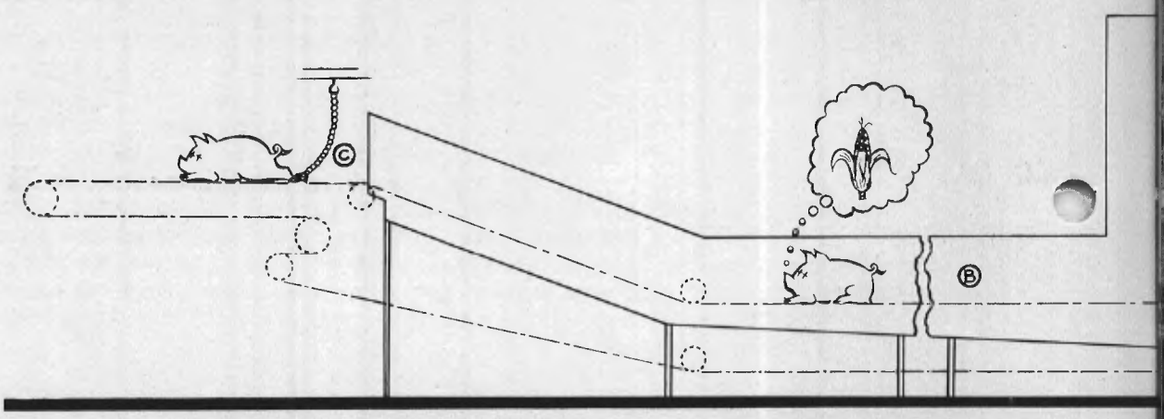
The 15 to 20 seconds that we settled upon as the period in which to have the hog in this condition was more than ample for both the hanging and the sticking.

Now, the hog was presented for shackling on a conveyor, at a level waist-high to the shackler, permitting him to do his job with complete safety, with ease, without having to bend over, or dive down for a hind leg, without having to lug the shackled hog to the traveling hoist, and with cleanliness to himself.

Indeed, pilot plant and working plant demonstrated that in this method, the shackle could be put on the hind leg of a hog with no greater effort than a ring may be placed on a lady's finger, and without the labor of persuasion occasionally associated with the latter job.

In this new method, a man places a chain around the motionless leg as easily as placing a rope around a post.

Similarly, the hog was presented to the sticker so that he could operate at arm's length, accurately, safely, unhurried, and, also, with cleanliness to himself.



We were able to work this out on a pilot plant scale. We also were able to explore for any possible harmful effects upon blood and meat. We found none and feel certain that there are none. Our laboratory men as well as our practical meat men of the packinghouse could not distinguish meat from hogs run through the pilot plant and meat from hogs handled in the standard way.

Also, in this period, we provided the meat inspection division of the department of agriculture with full opportunity to investigate any possibilities of harmful effects. Meat from anesthetized hogs was shipped to the Washington Laboratories. The M.I.D. found no harmful effects and gave its approval to the method.

But we still had to build a working plant, and we still had unanswered the question of how to get the hogs into the CO_2 chamber, one at a time, in succession, and fast enough so that at least 600 hogs could be handled in an hour.

We built the working plant on the ground floor next to the livestock pens, starting with one immobilizer. The problem of getting the hogs into the unit was not an easy one. Despite all we thought we knew about hog behavior, we found that we didn't quite know it all. We have made a number of improvements in our solution of the problem since we first built the working plant.

In the picture, you will see large rubber fingers operating on a continuous chain which maintain a separation of the hogs as they go through the immobilizer. The gate, you will see first, separates the hogs. It also is of rubber. It is power operated but manually controlled.

We expect to have the second immobilizer in operation some weeks hence. When it is completed, we will handle all our hogs at Austin by the new method.

We are sure the method can be applied to other packinghouse livestock.

The gas chamber is lower than the working level because CO_2 is heavier than air. The carbon dioxide, of course, is a familiar gas. One gets it in the soda of scotch and soda, or in any carbonated beverage. In our use, in the hog immobilizer, it is of sufficient concentration to drop the hog motionless and insensible on the moving conveyor but in no way to injure it.

***In response to inquiry about the immediate effects of CO_2 on hogs, Mr. Murphy states: "The hogs' reaction to the CO_2 atmosphere upon entry is nothing more observable than a sniffing of the air, comparable to a hunting dog. The hogs are in the CO_2 atmosphere not more than 7-12 seconds before losing consciousness."*

In all our testing and in our present use, accounting for 300,000 hogs, we have not lost a hog. The hog, if permitted to live, will be rid of the CO_2 and be able to walk off on its own power in less than a minute after becoming unconscious from the breathing in of the gas.

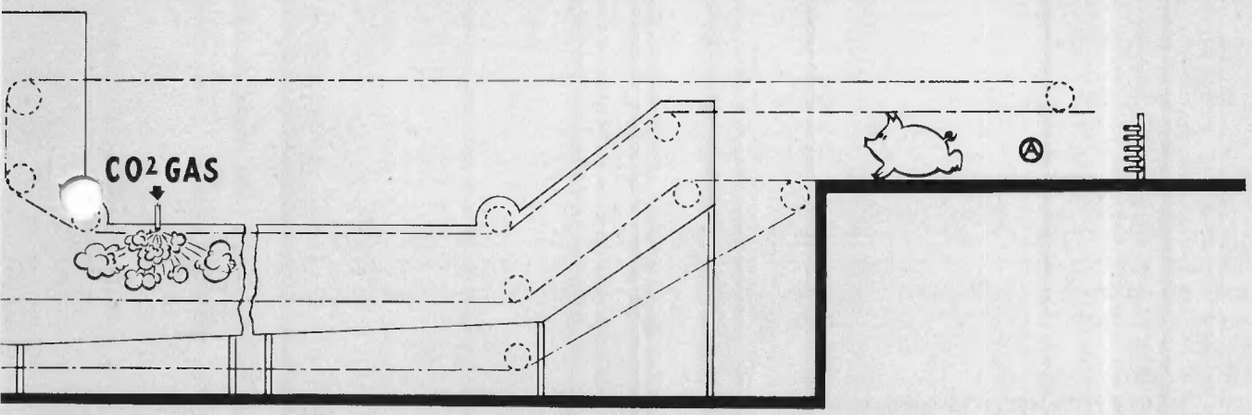
The CO_2 unites with the hemoglobin of the blood and thereby causes the unconsciousness. But the compound formed is unstable. The CO_2 component rapidly separates off and is discharged by exhalation as the hog continues to breathe fresh air before and after sticking.

The carbon dioxide is effective, but, as used, it is harmless.

We have found in a test of 19,000 hogs that our new method had an appreciable reduction in bloody trimmings.

In our plant at Austin the new method will enable us to put a number of shacklers and drivers to more productive work. One man now can hang twice the number of hogs with half the effort.

We feel certain that there is an appreciable savings in blood. The scalding tub by its paler color reveals less blood carried into it.



The cost of the CO_2 runs at less than three-quarters of a cent a hog. The lifting of the carcasses after sticking to the fourth floor, as is the case in our installation, is done by a 20 h.p. motor at a cost of 15 cents an hour.

Thus far, speaking in conclusion, our known, demonstrable gains are in operation savings and in working conditions. They alone more than compensate to us the cost of our years of research. We are eagerly watching all aspects of the processed hog for other, improved, anticipated effects. The motion pictures, we believe, will interest all packinghouse people. They reveal a basic and important, and I believe I can say with propriety, a revolutionary improvement in this business in which we are all engaged.

INSTITUTE EXHIBITS AT AAAS MEETING

At the 119th annual meeting of the American Association for the Advancement of Science, a group of 237 affiliated and associated societies, held in St. Louis in December, the Animal Welfare Institute for the second year had an exhibit at the Exposition of Science and Industry. This exhibit called attention, with pictures and captions, to the great progress made during the past century in various fields--communications, science, medicine, child welfare, transportation, industry--and asked: "Why so little progress in laboratory animal welfare?" The central panel listed six areas especially in need of attention:

PERSONNEL Many laboratories now employ untrained, underpaid men, classed as unskilled workers, who have little interest in caring for animals. As a result, both animals and research suffer.

AWI RECOMMENDS: Sound training of animal technicians, selected for competence and a liking for animals; adequate budget appropriations to insure fair salaries; a title commensurate with their responsibilities.

HOUSING Overcrowding of animals is a major problem in modern laboratories. For example, dogs and cats are often left for months or years with no provisions for regular exercise, in cages only large enough to permit them to stand, lie and turn; rabbits are frequently confined to cages too small to allow them to stretch out in their natural resting position.

AWI RECOMMENDS: Intelligent, thoughtful planning of housing, including a practical study of the natural habits of the animals being used. The size of enclosure should take into consideration the size of animal involved and the duration of confinement.

SANITATION AND DISEASE CONTROL Some laboratories, superficially clean, encourage the spread of disease by failing to sterilize equipment passed from one group of animals to another and by not isolating sick animals. Other laboratories are actually filthy. An attitude of "this is the best we can do" will not stop the spread of disease.

AWI RECOMMENDS: An efficient cleaning and sterilizing program by personnel who understand how communicable diseases spread; adequate heat, light and ventilation; availability of veterinary advice for all animal colonies; an isolation period for newly received animals, as well as isolation, treatment or destruction of sick animals.

MENTAL WELL-BEING Many laboratory animals suffer severely from fear, loneliness and anxiety. Studies in psychosomatic medicine indicate the importance of mental states.

AWI RECOMMENDS: Kind treatment of all animals, adequate space and companionship, and a special effort to keep contented the animals being held for long periods of time.

PHYSICAL COMFORT Animals of all kinds frequently are deprived of a comfortable resting place, are maintained on metal grids, without bedding or resting boards, and some are kept without water for long periods.

AWI RECOMMENDS: The provision of simple comforts for all experimental animals.

REDUCTION OF PAIN-INFLICTION Thoughtlessness in the planning of experimentation and teaching results in much unnecessary suffering. For example, why should nine consecutive experiments be performed by students in practice surgery on a single dog?

AWI RECOMMENDS: Careful planning of all experimental and teaching practices with a view to eliminating unnecessary suffering and reducing the number of animals used; use of non-survival experiments wherever possible; more extensive use of anesthesia and pain-relieving drugs.

At the bottom of the panel, in large type, appeared the statement which it would be profitable for everyone concerned with laboratory animals to bear in mind: "All laboratory animals are entitled to water, food, rest, exercise, companionship, sanitation and kindness."

Considerable interest among visitors to the Exposition was aroused because the exhibit of the AWI stood side by side with that of the National Society for Medical Research. A story in the St. Louis Post Dispatch, headlined "Animal Lovers, Vivisectionists in Same Exhibit", stated: "Animal lovers and research scientists who use animals in experimentation, bitter opponents for many years, will have booths side by side at the annual Exposition of Science and Industry....The exhibits, pointing up a growing spirit of conciliation between the two groups, are among about 70 that will occupy an entire floor of the Convention Hall."

The NSMR had, as part of its exhibit in the next booth, living animals currently in use for experimental purposes. Although the cages in which the dog and cat were housed were the commonly-used, mesh-bottom type without resting places, NSMR representatives remedied the situation by providing newspapers on which to rest, as well as a sand box for the cat, and gave both animals frequent exercise outside their cages.

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The Institute has moved its offices from 730 Fifth Avenue, New York 19, to temporary quarters in the Empire State Building where its mailing address is 350 Fifth Avenue, New York 1.

ANIMAL WELFARE INSTITUTE

350 Fifth Avenue, New York 1, N.Y.

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"ANIMALS WORK FOR YOU -- A. W. I. WORKS FOR THEM"

INFORMATION
REPORT

ANIMAL WELFARE INSTITUTE

350 FIFTH AVENUE, NEW YORK 1, N. Y.

March-April, 1953 Vol. 2 No. 2

THE Universities Federation for Animal Welfare, with headquarters in London, England, is probably best known to biologists for its useful text, *The UFAW Handbook on the Care and Management of Laboratory Animals,* copies of which may be found in laboratories throughout the world. The *Handbook* was the first comprehensive work of its kind, and since its publication in 1947, there has been a marked growth of interest in sound laboratory animal husbandry which is proving to be equally valuable to biological research and to experimental animals.

Recently the scientific sub-committee of the Universities Federation for Animal Welfare has applied the same spirit of careful scientific analysis to legislation for the protection of laboratory animals. Although the request for this well-prepared summary based on British law and practice did not come from the United States, the Animal Welfare Institute believes that it will be of interest to Americans. By publishing it, the Animal Welfare Institute hopes to stimulate a reasoned discussion of the possible ways of meeting the ethical problems presented by animal experimentation. One such suggestion was published in *Information Report Vol.* 1, *No.* 5, in the form of a letter from a biologist who advocates the exercise of supervision by scientific societies and journals. Other constructive contributions on this difficult subject will be welcomed.

Reprinted below, with the kind permission of the Universities Federation for Animal Welfare, is the full text of the document referred to above.

U. F. A. W. SUGGESTIONS FOR PROTECTION OF LABORATORY ANIMALS

FOREWORD

Some time ago two scientists working in another country asked us to suggest a form of legislation for the protection of laboratory animals which they might urge their own Government to adopt. In order to clarify the legal requirements we have therefore drafted this summary of the Cruelty to Animals Act, 1876, and of the practices which have gradually come to be based upon it. The points which seem to us important have been noted in the left-hand column. In the right-hand column we have added our comments and suggestions.

The Home Office Inspectors, whose duty it is to administer the Act from the Home Office, Whitehall, London S.W.1 will be very willing to help prospective overseas legislators or inspectors at any time by explaining to them more fully the working of the Act in this country. We strongly advise overseas enquirers to take advantage of this offer.

In Britain separate statutes control the preparation of biological therapeutic substances for medical and veterinary use, and we consider it important that there should be legislative control of the preparation of these substances. The relevant British statutes are the Therapeutic Substances Act, 1925 and subsequent Rules and Orders, administered by the Ministry of Health, and the Diseases of Animals (Therapeutic Substances) Order, 1952, administered by the Ministry of Agriculture. The protection of laboratory animals, however, is in the hands of the Home Office, which is equivalent to the Ministry of the Interior in most countries. We consider that this is a good arrangement, since the Home Office is in a position to give an unbiased opinion when the claims of science have to be weighed against the welfare of laboratory animals.

With regard to the supply of animals to laboratories in this country we would state that many institutions breed their own animals; that there is also a list of accredited breeders which is compiled by the Laboratory Animals Bureau, Medical Research Council, Holly Hill, Hampstead, London N.W.3; and that in addition animals are still bought in from outside sources. We consider that special breeding of all laboratory animals is desirable.

We hope that this document may be of service both to scientists and to their animals.

F. JEAN VINTER

Secretary of the Scientific Sub-Committee of UFAW

25th February, 1953.

Based on a study of the British Cruelty to Animals Act, 1876, on the licenses and certificates issued under the Act, and on the annual return *Experiments on Living Animals* issued by the Home Office.

Prepared by the Scientific Sub-Committee of UFAW (The Universities Federation for Animal Welfare), 284 Regent's Park Road, Finchley, London N.3.

1953

BRITISH LAW AND PRACTICE **S = Statutory Enactment** **P = Practice**	SUGGESTIONS FOR OVERSEAS
1. *Statutory enactment* applies to:- (a) experiments (b) on living vertebrate animals. (c) liable to cause pain.	1. The Act should apply to any experiment on a living, vertebrate animal which interferes with the normal health or comfort of that animal; except that any test carried out on the animal by a qualified person as an aid to the veterinary diagnosis of the condition of that animal should be specifically excluded from the Act. The Act should cover all biological assay on living animals.
2. S. Applies to vertebrates only. (Note that in Britain some workers voluntarily anesthetize invertebrates.)	2. As in Britain.
3. S. Experiments are limited to bonafide scientific work.	3. As in Britain.
4. S. All laboratories are registered by the Home Office.	4. As in Britain: by the Ministry of the Interior.
5. S. Research workers are licensed and the licence is tied to one or more specified registered places, unless specific permission is given for field experiments.	5. As in Britain.
6. S. The licensing authority is "a Principal Secretary of State". P. This is the Home Secretary.	6. Licensing body to be the Ministry of the Interior.
7. S. Inspectors are appointed by the Home Office. P. Up to the present these have always been medical men, sometimes past licensees. They visit laboratories without prior notice being given.	7. As in Britain; inspectors to be appointed by the licensing body. An Inspector should be a senior member of the medical or veterinary profession and should be a person of considerable standing, possessing the appropriate scientific knowledge and also, preferably, a good knowledge of animal husbandry. The number of inspectors should be sufficient to ensure observance of the law. The successful working of the Act depends upon the high quality of the inspectorate.* * In the Swiss Cantons of Basle and Berne there is inspection by a mixed Committee of scientists and laymen. This arrangement is said to work well.
8. S. Application for licence is made to the Secretary of State (Home Office) and must carry the signatures of (i) a university professor of one of certain stated subjects and (ii) a certain specified high scientific authority.	8. Each new applicant for a licence should have two sponsors who work in two different laboratories. Each sponsor should be either a university professor of a medical, veterinary or zoological science, or the scientific head of an approved research institute of comparable standing. At least one of the two signatories must have *personal* knowledge of the applicant and of the work proposed.
9. S. An account of the nature and type of the proposed experiments must be submitted to the Home Office and P. permission obtained before they are carried out.	9. As in Britain—for Home Office substitute the licensing body.

10. S. There may be attached to the licence "any conditions which the Secretary of State may think expedient", thus the licence issued may prescribe the nature of the experiments permissible and the species and number of animals which may be used. It can carry a note of the length of time for which it is valid.

10. As in Britain

11. S. Detailed returns have to be sent in to the Home Office annually.

P. All publications relating to work done under licence must be sent by the licensee to the Home Office.

11. As in Britain—to the licensing body.

References might replace a reprint, though the latter is to be preferred.

12. P. A Return relating to experiments on living animals, prepared by the Home Office Chief Inspector, is printed and published annually by Her Majesty's Stationery Office after presentation to parliament, and is sold at 4d a copy.

A duplicated list of the names and addresses of all registered places is prepared annually by the Home Office and could formerly be obtained from there on payment of 1/-.

A duplicated list of the names of all licensees, with a note as to the registered place or places where each works, is also prepared annually by the Home Office and could formerly be obtained from there on payment of 4/-.

These two lists are not at present printed for economy reasons.

12. As in Britain.

As in Britain.

As in Britain.

These two lists should be available for purchase at a small charge.

13. S. Grading of licences is based on favoured species:

(1) Horse; which may not be used if any other species will serve.

(2) Dog and cat; which may not be used, except for non-recovery work under anaesthesia, if any other animal will serve.

(3) Other vertebrates.

13. This grading of licences should be omitted since all experimental animals should be treated with the same high standard of humaneness.

14. S. A licence may be granted alone or accompanied by certificates, as follows:-

Licence alone. The experiment must be done under anaesthesia and there must be no recovery.

Certificate A dispenses with the use of an anaesthetic in the case of procedures not more severe than simple inoculation or superficial venesection.

Certificate B allows recovery from the anaesthetic.

Certificate C—see later.

Certificate E or EE granted with Cert. A or B enables a cat or dog to be used. Certs. E and EE do not relate to non-recovery experiments.

Certificate F allows the use of a horse.

14. The scope of a licence should be related to:-

(1) the experience and ability of the experimenter;
(2) the practicability of using anaesthesia;
(3) the question of recovering or non-recovery;
(4) the severity of the suffering involved.*

* It might be helpful to recognize three degrees of suffering.
Examples are offered accordingly.
Grade 1. Tumour formation without cachexia.
Slight skin irritation.
Grade 2. Tumour formation with cachexia or ulceration.
Severe skin irritation and inflamation.
Bone and joint infection.
Grade 3. Burning without anaesthesia. Perforation of abdominal viscus.
Distressing mutilations in which life is long preserved.
N.B. Grade 3 experiments are not allowed in Britain.

P. An Advisory Committee consisting of certain well-known and named medical men sitting under the chairmanship of a High Court Judge is consulted by the Home Secretary when the proposed work is likely to be specially severe on the animals, or is of a novel type.

Certificate C allows demonstrations to students or to learned societies; demonstrations must be done under anaesthesia and must be non-recovery.

If the suffering evoked in an experiment is likely to be unusually severe a special application should be made to the Minister who must decide, after taking advice from an advisory panel, whether the experiment is of sufficient importance to warrant the issue of a special limited licence.

Painful experiments should not be demonstrated. Other experiments may be demonstrated in a registered place by the holder of a licence to students of medicine, veterinary medicine, physiology or zoology, or to learned scientific societies for the purpose of illustrating experimental findings. Film exhibitions should be treated as live demonstrations.

S. Demonstrations to the public are strictly prohibited.

P. Demonstrations on living animals to children in schools are strictly prohibted.

As in Britain

As in Britain

15. P. Pain conditions are laid down as follows:

(i) if an animal at any time during any of the said experiments under the said certificate is found to be suffering pain which is either severe or is likely to endure, and if the main result of the experiment has been attained, the animal shall forthwith be painlessly killed.

(ii) if an animal at any time during any of the said experiments is found to be suffering severe pain which is likely to endure, such animal shall forthwith be painlessly killed.

(iii) if an animal appears to an inspector to be suffering considerable pain, and if such inspector directs such animal to be destroyed, it shall forthwith be painlessly killed.

Surgical operations must be done in such a way as to avoid sepsis, and if sepsis and pain occur the animal must be killed immediately.

15. As in Britain.

(i) If an animal at any time during any of the said experiments under the said certificate is found to be suffering pain which is *either* severe *or* is likely to endure, and if the main result of the experiment has been attained, the animal shall forthwith be painlessly killed.

(ii) If an animal at any time during any part of the said experiments is found to be suffering pain which is severe *and* likely to endure, such animal shall forthwith be painlessly killed.

(iii) As in Britain.

As in Britain.

16. S. The licensing authority's decision is final, even in secret work.

16. As in Britain.

17. S. Licensees are not allowed to delegate their work.

P. Senior technicians can be and are licensed.

17. As in Britain.
There should be no licensing of junior technicians. Senior technicians should as a rule only be licensed for routine work of definite limited scope.

18. S. Anaesthetic=general anaesthesia producing unconsciousness, or local or regional anaesthesia if applicable.

P. This is required for any procedure more severe than simple inoculation or superficial venesection.

Use of curare and other paralysants:

S. Curare is *not* to be regarded as an anaesthetic.

P. Prior notice of its intended use has to be given to the inspectorate and permission obtained before it is used.

18. As in Britain.
For the purposes of this Act anaesthesia shall be taken to mean a condition in which the animal is incapable of feeling any pain caused by the experimental procedure.

Animals must be adequately protected against false anaesthesia, i.e. immobility without loss of sensation; therefore there must be strict control whenever partial or complete paralysis is produced by any paralyzing drug or by electrical or other means.

19. P. Pithing or decerebration must include destruction of the basal ganglia.

P. Animals pithed or decerebrated and with basal ganglia destroyed, are not considered as living animals and may be used by students.

19. As in Britain.

20. S. Experiments done for the purpose of attaining manual skill are not allowed.

20. Subject to adequate provisions for ensuring humaneness, surgeons under training may be licensed for operating on anaesthetized, non-recovery animals for the purpose of acquiring manual skill.

21. P. Each licensee is responsible for the husbandry and care of his own animals.

21. As in Britain.
The appointment of a curator is often desirable, but this must never replace individual responsibility.

22. The services of a veterinary surgeon should always be available.

23. S. There is no right of entry to a registered place without a Justice's search warrant for anyone except the Home Office inspectors.

24. Penalties:

(i) P. Reprimand;

(ii) S. suspension or cancellation of licence;

(iii) S. prosecution (but this has never been resorted to); first offence £50, second offense £100 or 3 months' imprisonment.

24. A licence should be unhesitatingly suspended or cancelled if a licensee is found to have acted in a callous manner.

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INFORMATION
REPORT

ANIMAL WELFARE INSTITUTE

350 FIFTH AVENUE, NEW YORK 1, N. Y.

May-June, 1953 Vol. 2 No. 3

AT its outset, the Animal Welfare Institute was greeted with violent condemnation by two kinds of organizations: those which see nothing but good in animal experimentation and those which see nothing but evil in it. But it would now seem that both parties are seeking to represent the Institute as a pillar of support to their contradictory causes. That this is due to any change of feeling seems at the moment to be unlikely. Rather, it appears that both groups merely have seen in statements made by the officers and advisors of the Institute a means which they hoped might be used to serve their own ends.

An atmosphere of friendly cooperation and of mutual trust is most urgently needed in order to reach sound solutions to the problems involved in animal experimentation. The Institute stands for compromise so long as it is honorable and fair and gives recognition to the just claims of experimental biologists and experimental animals, but implications of dishonorable compromise cannot be permitted to jeopardize the integrity of the principles for which the Institute stands. Reprinted in this Report are the full texts of communications from the National Society for Medical Research and the National Anti-Vivisection Society, together with answers from the persons cited.

The kind of practical cooperation between research institutions and animal protective societies, of which the Institute approves, is exemplified in the agreement recently released for publication in Vancouver, British Columbia. The laboratories receive animals from the Vancouver city pound for experiments in which the animal is completely anesthetized and is killed while still unconscious. This procurement is fully and voluntarily supported by the SPCA.

Principles agreed to by University of British Columbia, British Columbia Medical Research Institute and Shaughnessy Hospital—December 10, 1952.

General

The Medical Profession of University of British Columbia, Shaughnessy Hospital and the British Columbia Medical Research Institute reaffirms its genuine desire to avoid, wherever possible, inflicting any suffering whatsoever on living animals used by them and further that enlightened consideration will be given to their feeding and housing.

Substitution of Other Media

Wherever possible and consistent with enlightened medical practices and procedures the use of living animals will be avoided where other media could reasonably be substituted.

Supply

No dogs or cats will be accepted from individual sellers or donors but the supply will be restricted to:

(1) Vancouver City Pound.

(2) University of British Columbia.

(3) A number of reliable breeders who are duly listed and whose premises are open to SPCA inspectors.

Anaesthesia

No animals will be subjected to a use involving other than pain of a minor degree such as the injection of a needle in a vein without being given adequate anaesthesia except in isolated cases.

It is the desire of these institutions if possible to avoid such exceptions entirely; but in rare cases where it is considered necessary for medical work then the decision to carry this out will be made not by one doctor but by the authorities in charge of the Institution and only after due consideration has been given to alternatives to avoid the infliction of pain of any appreciable degree or duration.

Exercise

Where animals particularly of the Canine or Anthropoid species are to be used in chronic experiments, these institutions reaffirm their desire to work towards arranging cages of reasonable size and providing exercise arrangements suitable to the animals concerned.

Incidence of Operations per Animal

These institutions reaffirm their intention to avoid if possible multiple operations on any one animal and that the exceptions to this will only be where enlightened medical practices and procedures make this a necessity in order to achieve the results being sought and certainly never for the purpose of merely obtaining surgical skills.

A form letter received by a number of the largest humane societies in the United States:

NATIONAL SOCIETY FOR MEDICAL RESEARCH
208 North Wells Street, Chicago 6, Ill. March 31, 1953

Gentlemen:

Recently Mrs. Christine Stevens, President of the Animal Welfare Institute, contacted the National Society for Medical Research to discuss a plan for getting dogs for medical research.

Mrs. Stevens informed Mr. Rohweder and myself that she thought it probable that she could get humane societies throughout the nation to provide dogs for research under certain conditions.

Her conditions were these: first, the NSMR would not advocate any more laws to provide unclaimed animals for research. Secondly the humane societies would furnish dogs only for acute studies—that is, for procedures in which the dogs would be used once and killed immediately such as in the experimental operations, shock studies and the like. Third, the question of remuneration for these dogs would have to be worked out locally with each society. Fourth, the humane societies would have to have assurance that the animals were being used humanely.

If these conditions were agreed upon, Mrs. Stevens said she was quite sure that in two years she could get humane societies throughout the nation to cooperate with medical schools and laboratories in getting dogs.

Before taking any definite action on Mrs. Stevens' proposal, it has been felt wise to sound out reaction from humane groups. Would your society be willing to furnish dogs to medical schools under the above conditions? Would you suggest some other arrangement under which you would be willing to furnish dogs for medical experimentation?

Perhaps Mrs. Stevens was being unduly optimistic, but she was quite certain she would be able to get dogs for research if given time to try. I would be very happy to hear your opinion on this matter.

Thank you for your time and cooperation.

Sincerely yours,
Hal Kome,
Assistant Executive Secretary

ANIMAL WELFARE INSTITUTE
350 Fifth Avenue
New York 1, New York

April 14, 1953

Memorandum to all humane societies:

Several humane societies have notified us that they have recently received a letter about the Animal Welfare Institute from the National Society for Medical Research, an organization advocating the passage of animal seizure legislation. Since this letter contains a misleading account of a conversation held with the Executive Secretary of the Institute and me, and since we do not know how many societies have received this letter, I feel that all societies should be given the facts.

Paragraph 1 of the NSMR letter erroneously states that I "contacted the NSMR to discuss a plan for getting dogs for medical research." On December 3 and 4, 1952, the Executive Secretary and I attended the annual meeting of the Animal Care Panel in Chicago. During the business meeting, I was asked to state the Institute's position on the matter of procurement of dogs and cats for laboratories. The position of the Institute has been repeatedly expressed in its Information Reports and I stated it again: (1) Disapproval of animal seizure legislation; (2) Approval of voluntary agreements now in effect in Louisville, Kentucky and Vancouver, British Columbia, whereby animals from the city pound which would otherwise be destroyed are made available for non-survival experiments under full anesthesia (but never for any experiments which may cause pain) and whereby rep-

resentatives of the humane societies have access to laboratories at any time, without appointment, to inspect conditions. (AWI Information Reports which have been mailed to you regularly contain more complete information on these arrangements.) At the conclusion of the Animal Care Panel meeting, Mr. Ralph Rohweder of the NSMR came to me and stated that he had not understood our attitude on procurement, and that he would like to talk about cooperation. I said that I would like very much to discuss such cooperation, which is much needed.

Paragraphs 2 and 4 state that I expressed the belief that within two years' time I probably "could get humane societies throughout the nation to cooperate with medical schools and laboratories in getting dogs." What I suggested during my conversation with Mr. Rohweder and Mr. Hal Kome was that a truce should be declared on animal seizure bills for two years, during which time conferences and discussions could be held in order to seek a decent solution to problems relating to the procurement and proper treatment of laboratory animals.

Paragraph 3 purports to outline the conditions which I thought necessary to reach such a solution. However, nowhere in the paragraph is any mention made of the most important conditions which I emphasized during our discussion: (1) That any unclaimed impounded animals used must be completely anesthetized and insensible to pain before the experiment is begun, and must be killed while still unconscious; (2) That there must be suitable guarantees of the humane treatment and use of animals from other sources used in chronic experiments. These two conditions would necessarily form an essential part of any agreement into which an animal protective society could ethically enter in regard to laboratory animals.

Paragraph 5 states: "Before taking any definite action on Mrs. Stevens' proposal, it has been felt wise to sound out reaction from humane groups." If the NSMR had a desire to work sincerely on a plan such as was discussed in Chicago, it might better have communicated directly with the Institute or the American Humane Association to that effect. Instead, the Institute was informed in December and again in February, 1953 by Mr. Rohweder that the reaction of the NSMR had already been sounded out and it was unanimously opposed to such a plan. If a change in opinion has taken place in the NSMR, neither the AWI nor the AHA has been so informed—nor was either organization informed that humane groups throughout the country were to be circularized.

Sincerely,
Christine Stevens
President

Text of a printed circular being widely distributed by the National Anti-Vivisection Society:

Noted Michigan Physiologist Attacks Cruelty in Vivisection

Hits work of "career scientists" with "scant interest in future of man."

During the annual meeting of the Federation of American Societies for Experimental Biology, Dr. Robert Gesell, Chairman of the Department of Physiology at the University of Michigan, made the following statement to the members of the American Physiological Society, April 15, 1952:

"The National Society for Medical Research would have us believe that there is an important issue in vivisection versus anti-vivisection. To a physiologist there can be no issue on vivisection per se.

"The real and urgent issue is humanity versus inhumanity in the use of experimental animals. But the N.S.M.R. attaches a stigma of anti-vivisection to any semblance of humanity. Anti-vivisection is their indispensable bogie which must be kept before the public at any cost. It is their only avenue towards unlimited procurement of animals for unlimited and uncontrolled experimentation.

"The N.S.M.R. has had but one idea since its organization, namely—to provide an inexhaustible number of animals to an ever growing crowd of career scientists with but little biological background and scant interest in the future of man.

"Consider what we are doing in the name of science, and the issue will be clear.

"We are drowning and suffocating unanaesthetized animals—in the name of science.

"We are determining the amount of abuse that life will endure in unanaesthetized animals—in the name of science.

"We are producing frustration ulcers in experimental animals under shocking conditions—in the name of science.

"We are observing animals for weeks, months, or even years under infamous conditions—in the name of science.

"Yet it is the National Society for Medical Research and its New York satellite that are providing the means to these ends. And how is this being accomplished? By undermining one of the finest organizations of our country: The American Humane Society.

"With the aid of the halo supplied by the faith of the American people in medical science, the N.S.M.R. converts sanctuaries of mercy into animal pounds at the beck and call of experimental laboratories regardless of how the animals are to be used.

"What a travesty of humanity ! This may well prove to be the blackest spot in the history of medical science."

UNIVERSITY OF MICHIGAN

Ann Arbor, Physiology Laboratory

May 5, 1953

The National Anti-Vivisection Society
37 South Wabash Avenue
Chicago 3, Illinois

Gentlemen:

Your circular letter and verbatim quote of my statement on the abuse of animal experimentation has come to my attention. I regard the printing and distribution of this material as a flagrant violation of humane ethics.

As you cannot help but know, my remarks are an attack on cruelty in vivisection and not an attack on vivisection itself. I therefore resent the dishonest distortion employed in the use of my words to serve your own intention, and I ask you to consider this letter as notice that I at no time gave you permission to quote me and that I cannot grant you the privilege of using this quote.

Very truly yours,
Robert Gesell

PROGRESS IN HUMANE SLAUGHTER

John Morrell and Company, well known pork and beef packers, report that they expect to install equipment for anesthetizing hogs prior to slaughter in their Sioux Falls, South Dakota and Ottumwa, Iowa plants in the near future. Mr. J. M. Foster, President of the Company, writes: "I felt right from the start it was probably the greatest advance in the meat packing industry over the past half century. As soon as the method was made available to the industry, we immediately placed orders with the manufacturer of the equipment for two units." The new method which uses CO_2 to render the animals unconscious was developed by the George A. Hormel Company of Austin, Minnesota. A detailed description of the invention and its great importance in eliminating suffering from the slaughtering process was contained in the Animal Welfare Institute Report, Vol. 2, No. 1. Many requests for additional copies of this report have been received from animal protective organizations and veterinarians who are helping to encourage the method's adoption on a wide scale. Extra copies are still available and will be supplied free on request as long as the supply lasts.

Over 68,000,000 hogs are slaughtered annually in the United States. The adoption by all packers of this humane device would automatically prevent the incalculable amount of pain and fear which most of these animals still undergo.

ANIMAL WELFARE INSTITUTE TAX EXEMPT

The Institute has received notification from the United States Treasury Department that it has been classified as a tax exempt organization under Section 101 (6) of the Internal Revenue Code. This makes all dues, contributions, bequests and legacies made to the Institute deductible for income tax purposes.

ANIMAL WELFARE INSTITUTE

350 Fifth Avenue New York 1, N. Y.

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INFORMATION
REPORT

ANIMAL WELFARE INSTITUTE

350 FIFTH AVENUE, NEW YORK 1, N. Y.

September - October, 1953 Vol. 2 No. 4

AWARD FOR THE ENCOURAGEMENT OF KINDNESS TO LABORATORY ANIMALS

DR. Albert Schweitzer has frequently been designated as the world's greatest living man. He is universally loved and admired. Medical men and animal protective workers take a particular pride in his achievements because he brought modern medical aid to the natives of French Equatorial Africa who gratefully flock to his hospital at Lambarene, and because he thought out the great philosophical concept of "Reverence for Life" which teaches kindness and consideration for animals just as for human beings.

The Animal Welfare Institute is proud to announce the creation of a medal honoring Dr. Schweitzer. The American sculptor, Gustav Bohland, is now at work moulding in clay the features of Dr. Schweitzer and of the many animals to be represented on the medal which will be awarded annually in recognition of an outstanding contribution to the humane treatment of animals. The primary purpose of the award is to encourage progress in laboratory animal welfare, but whenever an especially important advance is made in any field of animal protection it will be given consideration by the Albert Schweitzer Award Committee.

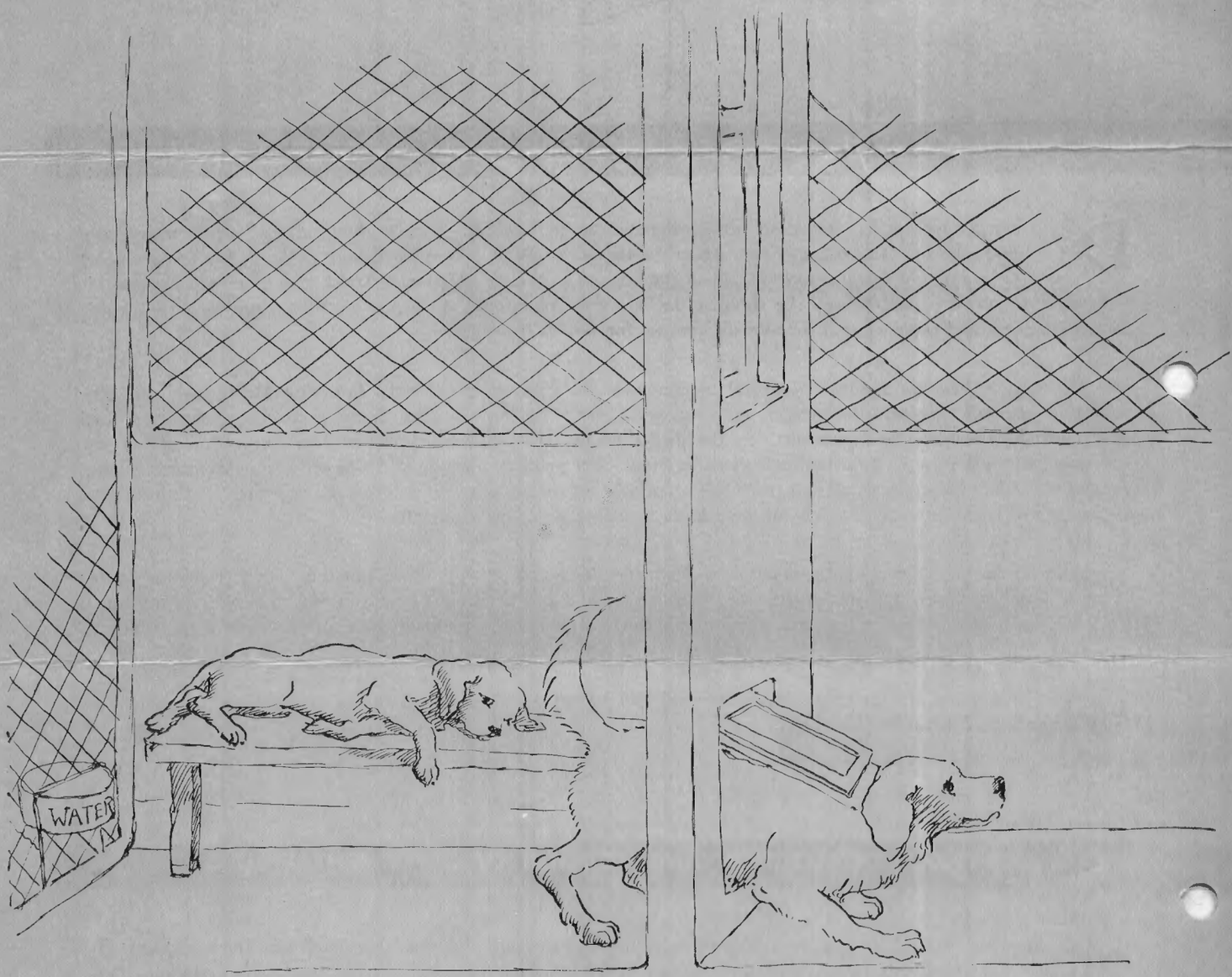
In giving his permission for the creation of the medal by the Animal Welfare Institute, Dr. Schweitzer wrote: "I am profoundly moved that you should wish to give my name to the medal. I give you this right with all my heart. I should never have thought that my philosophy, which embodies our compassionate attitude toward all creatures, would be noticed and recognized during my lifetime. I knew that this truth would impose itself one day on thought, but it is the great and moving surprise of my life that I should be the witness of the progress of ethics. Your medal celebrates this progress: philosophy obliged to intervene for animals when up until now it has shown so little interest in them."

SOME CONSIDERATIONS IN SELECTION AND HOUSING OF EXPERIMENTAL DOGS

Dr. Clive M. McCay, Professor of Nutrition of the Department of Animal Husbandry in Cornell University, has accurately described the conditions which prevail in far too many laboratories using dogs. "No attention is paid to breed or past history. The dogs often get little or no exercise, but are confined to small cages in poorly ventilated rooms, where the noise resembles the disturbed ward in a mental hospital. Often little attention is paid to internal or external parasites. Scientists, including nutritionists, sometimes do not know the composition of their stock diet which may be 'table scraps'. Such research benefits neither man nor dogs because it clutters the literature with false and misleading conclusions." These words were written in 1949, in the preface to the second edition of "Nutrition of the Dog", and Dr. McCay in a recent communication to the AWI giving permission to quote from the book, added: "My own belief, as I stated in the preface, is that much of the dog research of the past is questionable because of the poor quality of dogs and the poor housing of the experimental animals. I am convinced that much of the medical school research with animals must ultimately be done on farms because the cost of land, buildings and labor makes good care and housing very difficult in congested cities."

Another communication concerning the management of laboratory dogs was received from Dr. Alastair N. Worden, Editor of the UFAW Handbook on the Care and Management of Laboratory Animals. He writes in part: "I doubt very much whether two weeks is an adequate isolation period for dogs of unknown history. The incubation period for some of the virus infections of dogs is surely often longer than this, and I personally would be inclined to double the period. I must say that I agree with you wholeheartedly concerning the use of dogs bred specially for the purpose so far as long term experimentation is concerned. I have always been impressed by the colony of dogs maintained at the Medical Research Council laboratories for the Laidlow-Dunkin work on canine distemper. The animals had been bred in a separate colony primarily for the purposes of excluding the possibility of extraneous infection, but their general well-being, their adaptation to Institute life, their familiarity with the

attendants and so forth were a pleasure to behold. I made up my mind there and then that that was the ideal way to produce dogs for experimental work, and the more that I have seen of experimental work with dogs otherwise, the more firmly do I hold to this view. I have more recently been studying the breeding colony of cats established at the Royal Free Hospital School of Medicine, London, and very much the same facts obtain . . . In addition to humanitarian aspects it does seem to me that, from the experimental point of view, the advantages of animals bred in the laboratories are overwhelming. Infection is one point, adaptation to prevailing conditions is another, and yet a third is the known nature of the material with which one is working."



Suitable kennel for two laboratory dogs with self-operating door to outside runway

In "The Urinary Excretion of Vitamin B1, Riboflavine and Nicotinic Acid by the Dog", published in the Veterinary Record, Dr. Worden has made some interesting observations on the confinement of dogs and the effect it may have on their body functions. He states: "There seems little doubt from the results presented in the present study that, even when a dog settles down well, a period of 24 hours is inadequate to establish urinary excretory levels and that a trial lasting for seven to ten days is preferable. It was not felt desirable in the present study to confine such active animals to the cage for longer periods than this. The effect of unsuitable temperament was clearly shown in the case of animal No. 3, a highly-strung Cocker Spaniel bitch, which was discarded for further studies of this type. The effect of size was evident in the case of Nos. 5 and 6, the two Golden Retrievers, which although temperamentally satisfactory were too large even for the relatively commodious metabolism cage employed. Amoroso (1952) has drawn our attention to similar difficulties in studying the urinary excretion of 17 keroateroids. The overall size of the metabolism cage is a factor that does not appear always to be taken into account in trials involving dogs, and models that are relatively too small are sometimes employed."

Dr. Worden indicates that the results obtained with dogs weighing 75 pounds were significantly different from those with smaller dogs in a cage the internal dimensions of which were 55 inches by 42 inches by 32½ inches.

Many dogs are being housed routinely and for long periods in cages little more than half the size of the one described above. It would seem wise for those who continue to advocate the small-cage-no-exercise method of maintaining laboratory dogs for months or even years to consider the possiblity that their experimental results may be jeopardized by such a procedure.

Even in conducting metabolism studies it is not always necessary to keep dogs confined to cages. Dr. McCay states: "Under conditions where only the feces are collected, dogs may even be allowed to run a couple of times daily on grass or ground where the excreta can be conveniently recovered." Such permission to run is greatly appreciated by dogs, and there are numerous significant ways in which it is reflected. For example, Dr. McCay states: "Well-nourished dogs that get plenty of exercise are much more resistant to this disease [sarcoptic mange] than are poorly fed and under-exercised ones." Possibly lack of exercise is an important factor in developing the mange so often seen in laboratory dogs that have been confined for long periods.

It does not seem unreasonable to suppose that more thought, energy and money directed toward the provision of comfortable animal quarters of an adequate size might do more to advance scientific knowledge than efforts to increase the number of heterogeneous animals of unknown history crowded into already overcrowded dog rooms.

FUNDS FOR HUMANELY CONDUCTED RESEARCH

A growing realization on the part of the general public that wide variations exist among research institutions, and that research workers themselves vary as human beings all vary, was evidenced in a letter received recently by the Institute from one of its members who wrote regarding the availability of a sum of money "in memory of my mother who died from a rather rare form of anemia, and it has been suggested that it be devoted to research in blood diseases. I should be glad to give it for that purpose, but do not wish to have it used where it will mean suffering for animals. I should be especially glad if there were any form of research in that field which would not involve animals at all."

It is recommended that the housing, treatment, and experimental use of animals in any institution to which a private person contemplates making a gift or bequest be conscientiously investigated. Donors can encourage the maintenance of high humane standards in research laboratories by making their gifts conditional on the careful avoidance of cruel or wasteful use of animals.

THE NSMR "OPEN LETTER"

Last June humane societies throughout the United States were surprised to receive the first of a series of "Open Letters" addressed to "Humane Leaders and Workers Everywhere." The letters came from the National Society for Medical Research, a Chicago organization which for years has spearheaded the drive for enactment of animal seizure legislation that would force humane societies to supply laboratories with animals from their shelters. The NSMR has been accustomed to refer to humane workers as "anti-vivisectionists" who operate "slaughterhouses"; in this series, however, the unidentified writer begs for the "advice of humane workers on the animal supply problem" and explains that "we at the NSMR feel that in our crusade against suffering we have much in common with humane workers everywhere." Expressions of opinion from humane workers indicate that they are viewing this about-face with considerable skepticism.

Also, in the time between August 21 and September 24th issues of the "Open Letter", something odd seemed to have occurred at NSMR headquarters. Compare the following statements: August 21, 1953: "We estimate that 10% [of unclaimed dogs and cats] would fill scientific needs." September 24, 1953: "Less than 5% of these animals would fill all research needs. Humane workers must assume either that the NSMR doesn't know what it's talking about or that it has decided to cut medical research using dogs and cats in half. If the latter, does it plan to begin this charity at home? Will there be room for exercise pens after half of the small cages in Chicago laboratories have been disposed of? These are questions of real interest to humane leaders and workers.

It is unlikely, however, that they can depend on "Open Letter" to give them accurate answers after reading the account of the Rochester Humane Society contained in the July 17th issue. "By refusing to obey the law of the State of New York," it reads in part, "the Society has forfeited its right to visit the local laboratories and make sure that animals there are being treated humanely. Fortunately, medical scientists are not the monsters anti-vivisectionists like to think they are. Because it is entirely up to the medical scientists in such communities as Rochester to maintain the highest standards of care for their animals. The humane society is in default."

The facts regarding Rochester are as follows:

1. Under the Hatch-Metcalf Act the New York State Health Commissioner is responsible for enforcing humane standards of animal care. Does the NSMR intend to accuse the Commissioner of negligence when it says, "it is entirely up to the medical scientists in such communities as Rochester to maintain the highest standards of care for their animals" ?

2. The Rochester Humane Society announced long before the passage of the Hatch-Metcalf Act that if such legislation passed it would give up its $35,000 a year contract to operate the pound because it could not ethically act as a procurement agent for dogs and cats used in painful experiments. When the Act passed, the Society kept its word.

3. Mr. C. Raymond Naramore, Executive Director of the Rochester Humane Society, frequently visits local laboratories despite the fact that the Society does not supply them with animals from its shelter.

Despite the shifting tactics of advocates of animal seizure legislation, no such legislation was passed anywhere in the United States during 1953. Rightfully feeling that this successful opposition was due largely to their united stand against such legislation, humane leaders from all parts of the United States meeting at the annual convention of the American Humane Association in Denver, Colorado October 7 - 10, 1953 passed the following resolution with only one dissenting vote:

"Whereas no legislation compelling the surrender of dogs or cats to laboratories was enacted in 1953, thus clearly demonstrating that such proposed legislation can be defeated whenever humane opposition is united and the public properly informed,

"And Whereas the American Humane Association is unalterably opposed to such legislation,

"Be It Hereby Resolved that the delegates to the convention of the American Humane Association in Denver, Colorado October 7 - 10, 1953 do hereby pledge themselves to oppose in a firm, reasonable and efficient manner any such legislation which may be proposed in their localties in 1954, with a view to preventing its passage and to discouraging its introduction in any future year."

ANNUAL REPORT

The second annual report of the Animal Welfare Institute was distributed to members in time for the annual membership meeting, October 1, 1953.

Copies of this report, which includes a summary of the Information Reports published during the year, can be obtained by addressing a request to the offices of the Institute, 350 Fifth Avenue, New York 1, New York.

ANIMAL WELFARE INSTITUTE

350 Fifth Avenue New York 1, N. Y.

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INFORMATION
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ANIMAL WELFARE INSTITUTE

350 FIFTH AVENUE, NEW YORK 1, N. Y.

November - December, 1953 Vol. 2 No. 5

A MANUAL entitled "Basic Care of Experimental Animals" has been prepared by the Animal Welfare Institute for use by the men and women who take care of laboratory animals. Sample copies have been distributed to the Deans of Medical and Veterinary Colleges, the directors of pharmaceutical houses, and others who are concerned with the proper maintenance of animal colonies. The response clearly shows the need for such a publication, and requests from laboratories throughout the United States and Canada are now being filled. Because information such as is contained in the manual serves the interests of both science and humanitarianism and should help to effect the better understanding between them which is one of the Institute's goals, these manuals are being distributed without charge. The only requirement is that they be used. Requests from anyone connected with experimental animals are invited. An ample supply has been printed so that copies can be made available to all who can use them.

Officers of the Institute are very appreciative of the many thoughtful letters which have been received concerning the manual. Accordingly, a few sample comments are printed below.

From an agricultural college: "Thanks for sending me your excellent bulletin on basic care of experimental animals. The information presented is accurate, the large type makes easy reading possible, and the illustrations are well drawn. If you have extra copies, we would like fifty to distribute to our graduate students since many of them will ultimately be in charge of animal colonies."

From a medical school: "Thank you for the very well prepared brochure "Basic Care of Experimental Animals." You and your associates may be very proud at the skillful way in which this brochure has been prepared. It is clearly organized and the material in it seems to be soundly developed . . . If you care to send thirty copies of your brochure to me, I will see to it that one is distributed to each of the animal caretakers in our laboratories. I am confident that all would profit from the use of the item."

From a pharmaceutical house: "We congratulate you on the excellent manual, Basic Care of Experimental Animals, which we would, indeed, like to distribute to our personnel handling animals. We would appreciate your sending 36 copies of the manual to my attention."

From a research foundation: "Such eminently practical material as you have incorporated in your brochure should be of genuine assistance to those interested in the most reliable and humane methods of pursuing experimental research. We are, indeed, fortunate in having a graduate veterinarian on our staff, and I propose to loan him the booklet for reading. He has already developed a fine prophylactic program for insuring the health of our animals, but despite his fine program, I feel sure he will gain benefit from reading your brochure."

From a veterinary college: "We think that you are to be commended on the very excellent manual on the care of experimental animals, copy of which we received today. We appreciate it highly and would be most happy if you could send copies to the following individuals."

FOURTH ANNUAL ANIMAL CARE PANEL

The Animal Care Panel's most varied and interesting program to date was presented in Chicago December 2 and 3, 1953. The need for a thorough knowledge of the physical condition, history and heredity of animals used in experimentation, which was first discussed at last year's meeting, was again stressed, one entire morning being devoted to papers on controlling the genetic background of laboratory animals. Dr. J. W. Gowen of Iowa State College is to be congratulated for emphasizing the importance of the quality of scientific investigations as distinct from mere quantity. Speaking on the selection of appropriate animals for a given investigation, he stressed the fact that each animal is an individual and that, even when using inbred strains, the experimenter must deal with the individual. He said: "An experiment represents a tiny controlled space surrounded by a vast uncontrolled arena acting both directly on the event and interacting with the controlled elements. Herein lie the dangers in experiments particularly with the current craze for the statistical approach. The investigator frequently misleads himself into thinking he is dealing with the whole universe and makes his interpretations accordingly."

Dr. O. N. Eaton outlined the activities of the new Institute of Animal Resources, National Research Council, of which he is the Executive Secretary. One of its specific objectives is the improvement of conditions pertaining to the rearing and shipment of animals. This work should do much to raise standards in regard to the quality of laboratory animals and their care. Dr. Eaton spoke highly of the Laboratory Animals Bureau of London, England whose work is similar to that which the Institute of Animal Resources has begun in this country.

A first-hand report on the work of the Laboratory Animals Bureau was presented by its director, Dr. W. Lane-Petter, who also spoke of the work of the Animal Technicians Association which sets standards and assists in the training of animal colony personnel. Dr. Lane-Petter said that the British law relating to animal experiments has not hampered scientists and he stated that one of its effects has been to protect scientists from unjust attacks. He spoke humanely and intelligently on the ethics of animal experimentation in civilized countries. Both biologists and laymen interested in laboratory animal welfare will look forward to reading his speech in full when the proceedings of the Animal Care Panel are published.

Another encouraging aspect of the meeting was the emphasis placed upon the health and comfort of the animal by Major W. H. Dietrich of First Army Area Medical Laboratory in his discussion of small animal cages. Pointing out that we owe a reasonable degree of comfort to laboratory animals, he advocated resting boards for guinea pigs and rabbits kept in mesh bottom cages.

It is regrettable that negative criticism should need to be made of any part of a program which presented so much that was good. However, there was one dangerous concept which received repeated emphasis. It might be called the "one minute—one inch—one cent saving" approach to animal colony management. No one can can deny the value of a proper regard for efficiency and economy in the management of any undertaking. Efficiency and economy are not, however, ends in themselves, and have no value unless they help to forward the basic objectives to which they are being applied. If permitted to become ends in themselves, they can act as positive obstacles to those basic objectives. During the meetings, it often appeared that the real aim of research was being forgotten and another quite different goal being substituted: that of trying to keep the largest number of animals in the smallest possible space, with the least possible care, on the cheapest possible rations. Such an objective not only conflicts sharply with ethical considerations in the conduct of research using animals, but is incompatible with biological research of the highest quality.

RETROGRESSION IN LABORATORY ANIMAL HOUSING

Representatives of the Animal Welfare Institute recently visited animal quarters in two newly completed research buildings whose total cost ran into millions of dollars. Although geographically far apart, these new buildings are strikingly similar in many respects. Both house large numbers of dogs being used for surgical experiments. In each case, those who planned the buildings saw fit to confine nearly one hundred dogs to a single room filled as full as possible with metal cages. These cages do not allow room for normal exercise, yet no outside runways or exercise pens of any kind are provided. The rooms have no windows. The noise of dogs barking and throwing themselves about in the cages—natural behavior for dogs which lack exercise and companionship—is deafening when visitors enter the room.

The visit to one of these rooms took place shortly after the morning cleaning. The cages had been thoroughly hosed. So, unfortunately, had the dogs, especially those which were too ill to get up and move about in order to avoid a complete wetting. These unfortunates lay shivering on the metal floors of their cages.

What is the cause of such treatment? Is it scientifically desirable to subject experimental animals to physical and mental stresses unconnected with the experiment? From a humane point of view, is it desirable to cause unnecessary distress to and inflict undeserved punishment on animals which are being sacrificed for human benefit?

The assumption must be that a practical cause lies behind this situation. Advocates of animal seizure laws sometimes insist that the cost of dogs is so high that budget allowances are used up in procuring animals rather than in caring for them. But in both institutions referred to above, dogs are obtained at a nominal figure from local pounds. With dogs plentiful and cheap, and millions of dollars available for new buildings in which surgery on dogs was a major part of the research planned, why were not special efforts made to provide comfortable quarters for dogs, with adequate exercise facilities?

It is interesting to observe that both institutions went through three major phases in the housing of large animals. At first, their dog quarters consisted of inside kennels connecting directly with outside runways, to and from which the animals might go at will. These comfortable and relatively expensive quarters were built at a time when funds for research were much more difficult to obtain than today. Later, outside runways were dispensed with, but the inside kennels provided were still roomy, and dogs confined to them did not break into deafening protests against their environment the moment a stranger entered the room. Today a paradoxical situation exists: quantitatively, animals and dollars being used for research have reached unprecedented heights; qualitatively, two of the newest examples of dog quarters, as compared with their forerunners in the same institutions, have reached unprecedented depths.

No clear reasons have yet been offered to explain why institutions which once could show their animal quarters with pride have lowered their standards. However, the current over-emphasis on efficiency, mass production and "assembly line methods" appears to be partially to blame. Research workers need to be on the alert, when new construction is being planned for the institutions in which they work, to make sure that comfortable provision is made for the experimental animals. Without such provision the research, as well as the animals, is likely to suffer. The Animal Welfare Institute is glad to assist institutions planning new buildings by submitting plans and suggestions for soundly designed animal quarters.

MANAGEMENT OF AN ANIMAL HOUSE

Anyone who makes a point of visiting laboratory animal quarters in Great Britain is bound to hear about the cat colony at the Royal Free Hospital School of Medicine. *It is a good example of the successful combination of scientific, humane, and practical thinking which animal colonies demand, and it was not surprising to find that Dr. Patricia Scott, who teaches physiology and holds the position of Curator of the Animal Unit, has devoted much careful, consecutive thought not only to the care of the cats which she is studying, but to other species of laboratory animals and to the administration of the work as a whole. At the request of the Animal Welfare Institute, Dr. Scott has very kindly prepared a summary of the procedure followed in the management of the animal house unit. It is full of constructive suggestions which should prove especially valuable to those responsible for similar work in other institutions using experimental animals.

MANAGEMENT OF AN ANIMAL HOUSE UNIT ATTACHED TO AN ENGLISH MEDICAL SCHOOL

by Patricia P. Scott, B. Sc. Ph.D., F.R.M.S.

The Animal Unit at the Royal Free Hospital School of Medicine (University of London) has been developed over a period of more than thirty years from a single room where animals were kept for short periods, tended by unskilled part-time helpers, to a unit accommodating long-and short-term experimental animals, equipped with its own theatre and staffed by trained Animal Technicians.

I *The function of the Unit* is to supply animals for the following purposes:—

1. *For teaching material,* as requested by the Pre-clinical Departments (Biology, Chemistry, Physics, Anatomy, Physiology and Pharmacology). These animals are killed with anaesthetics or pithed, and used for dissection and for experiments on surviving organs and tissues. Under English Law medical students may not carry out experiments on whole living animals even under anaesthetics but decerebrate animals, i.e. those in which the fore-brain, including basal ganglia, have been destroyed under an anaesthetic by a qualified person holding a Licence, may be used in class experiments.

2. *For acute experiments* which are carried out in the various departments. Animals are supplied upon request by any member of the academic staff or research worker, who holds a Home Office License under the Cruelty to Animals Act.

3. *For long-term experiments.* All animals used in these experiments must be kept in the Animal Unit, although they may be temporarily transferred to the departments for investigation involving the use of special apparatus. Provision of facilities for their maintenance is the function of the Unit, but each individual worker is personally responsible for giving instructions to the Animal Technicians for the care of his animals. Moreover, no experimental manipulation may be carried out on the animals except by the experimenter himself. These rules are imposed on the worker by the Home Office, and to carry out survival experiments (including dietary ones) special certificates have to be added to the License, which, by itself, only permits acute experiments to be undertaken. To avoid overcrowding and other difficulties all requests for cage space and facilities in the Animal Unit are considered by the Animal House Committee. These regulations may seem complicated, petty and cramping to Americans but, in practice, they run very smoothly and workers, especially the inexperienced, appreciate the helpful advice they often receive from the various bodies through which their applications pass. This enforced planning also ensures that reliable information is obtained in fewer experiments using fewer animals, thus effecting considerable savings in time, space occupied and numbers of animals subjected to experiments, making in fact an overall saving in terms of hard cash.

4. *For maintaining breeding colonies* of varieties of animals essential to any particular research problem. At present two strains of rat and a cat colony are maintained, but on other occasions strains of guinea-pigs, mice and rabbits have also been kept.

II *Administration and Funds.*

A sub-committee, consisting of a representative of each department using the animal unit, with addition of the Curator as Secretary (ex-officio) is responsible for advising a higher committee on all matters concerning the Unit. The sub-committee meets four or five times a year, discusses major problems arising, considers application for space for long-term experiments on their merits, interviews technicians, and produces an annual report to its parent committee.

Financially, the animal unit is treated as a department, with its own allocation for maintenance, capital expenditure and salaries. The estimates for these are made on a five-yearly basis and, after passing various committees of this Institution are finally forwarded to the University. No charges are made for the services or animals supplied by the Animal Unit, but experimenters using very expensive drugs, dietary constituents or special apparatus are expected to contribute financially for these from grants given by external organisations, or from their departmental research funds. The Curator is responsible for supervising a cash account and for signing orders and bills presented for payment to the Institution's Accountant. A check on expenditure

*See Journal Physiology, Vol. 116 & Vol. 118 by Patricia P. Scott; Journal of the Animal Technicians Association Vol. 3, No. 2 by Miss O. Cornelius, Animal Technician at the Royal Free Hospital School of Medicine.

(applied to all departments) is provided by a system which freely permits the purchase of individual items costing less than £5. Items between £5 and £25 may be purchased but must be reported, while for items over £25 permission of the Finance Committee and Council must be first obtained. Moreover, it is the business of the Curator to balance continually current expenditure against available resources.

III *Staffing.*

The Unit is at present staffed by two qualified (trained) animal technicians, a student technician in training, and a cleaner. The technicians are encouraged to belong to the Animal Technicians Association and to take suitable qualifying examinations. Student technicians are given their fees for evening classes and grants for books, and get off-duty time during the working week for study. Sunday and holiday duties are arranged by rota. Each experimenter is expected in addition, to provide some occasional technical help for his animals, which helps to train technicians from other departments. Technicians and academically qualified research assistants from other institutions, also visit this Institution from time to time for short periods of training. Fully trained technicians are well paid by English standards and do not tend to change their posts very frequently. Student technicians, who start at 16-17 years, on the other hand, come and go, the boys being liable for military training, though often able to continue with laboratory work while in the Forces.

IV *The Curator System.*

In this Institution, the Curator of the Animal Unit acts as a Head of Department for purposes of administration and general responsibility, and is a member of the academic staff holding a full-time teaching post in one of the Pre-clinical Departments. This appointment is made by the Council and is unpaid, although in certain circumstances travelling expenses can be claimed. The Curator must therefore be interested in the work rather than in financial rewards, and for this reason it seems essential that his or her research should centre round the Animal Unit. In my own case, interest in problems of nutrition and reproduction, especially in relation to cats, ensures that I automatically spend much of my research time (i.e., when not teaching) in the Animal House. It is, therefore, relatively easy to supervise the technical staff, giving praise where due and apportioning blame where it truly rests. Unless a senior technician has a very exceptional background, including some academic training in appropriate sciences, he or she should not, in my opinion, be left to carry the entire responsibility. The Curator in charge must see that experimenters have the technical help they need, and that duties are flexibly and honestly performed in accordance with the needs of the experimental animals rather than the ideas of the technician. Inaccurate and unscrupulous technicians can wreck more experiments in the Animal Unit than in any other department. The Curator system is gradually coming into use in institutes in England having animal units, but it is by no means universal. Moreover, the centralisation of the unit calls for tactful co-operation on the part of departments and all concerned—a co-operation which is not always easily achieved.

V *Daily Routine Work.*

This is arranged by the Curator and Senior Technician. The Curator is the final authority on matters of internal organisation, responsible for smoothing out disputes and preventing neglect of animals due to inefficiency or laziness. Individual experimenters are requested to examine their animals at least three times a week and more frequently immediately post-operation. The routine for any particular experiment is usually planned in consultation with the Curator and Senior Technician, since the investigators are not often experienced in animal husbandry. All illness and deaths among experimental animals and breeding stock are immediately reported to the Curator, who undertakes post-mortems and arranges bacteriological examinations to establish the cause of the trouble. Unhealthy and suspected contact animals are immediately isolated, a precaution often preventing further losses among valuable stock and experimental animals, while cages and vessels for food and water are sterilized.

Other steps taken to ensure health are varying the diets of breeding stock and animals who are not being subjected to experiments involving the use of special diets. In this way deficiencies are avoided and really healthy animals are provided for long-term experiments. Larger animals, such as dogs and cats, are provided with adequate exercising arrangements. Dogs are taken for daily walks unless they are under experiment.

Correction: In the last issue of the Information Report, Vol. 2. No. 4, a misprint on Page 2 should be corrected to read: Amoroso (1952) has drawn our attention to similar difficulties in studying the urinary excretion of 17 ketosteroids.