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MAGNESIUM SULFATE—A NEW INSECTICIDE

DR. V. R. HABER discovered the insecticidal properties of magnesium sulfate (Epsom salts) several years ago. His tests showed that $MgSO_4$ used as a spray, in the proper concentration, constitutes an effective control for the Mexican bean beetle (*Epilachna corrupta* Muls.). This spray has many advantages over arsenical sprays, in that it is easily applied, easily removed in preparing beans for cooking, and is harmless to humans if ingested.[1]

Hawkins, in a paper on the wheat wireworm (*Agriotes mancus* Say), finds magnesium sulfate and magnesium chloride toxic to this form.[2]

The following work on grasshopper control by $MgSO_4$ is the outgrowth of Dr. Haber's suggestion. Since there were neither time nor facilities to make complete tests, the results are only preliminary.

Grasshoppers, confined in small insect cages, four per cage, were fed with bran baits made of bran, molasses and water, with $MgSO_4$ added for test groups. The control groups received the bait with no poison, while others received a 5 per cent. arsenic bran bait. The test groups received the standard bait with 5 per cent., 10 per cent., 15 per cent., 20 per cent., 25 per cent. and 30 per cent. $MgSO_4$ added.

From comparisons of the mortality rates among the different groups, the following formula for a grasshopper bait is proposed:

Bran	60 per cent. to 65 per cent.
Molasses	15 " "
$MgSO_4$	20 " " to 25 " "
Water	Enough to moisten.

This formula seems to be just as effective as the 5 per cent. arsenic bait, it is cheaper, and it is absolutely harmless to humans, cattle, swine and poultry or other birds.

These results indicate that $MgSO_4$ may be an insecticide of value for the control of mandibulate insects. As a spray, it could be used safely on many vegetables and fruits, with little danger to humans and domesticated animals eating such foods. It is cheap, easily dissolved and should be compatible with other insecticides. Entomologists with facilities for testing $MgSO_4$ as an insecticide against mandibulate insects should attempt to determine its value in the control of such forms.

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ANATOMICAL NOMENCLATURE

AT the annual meeting of the American Association of Anatomists, held at the University of Toronto on March 26, 1937, Professor C. M. Jackson, chairman of the Committee on Anatomical Nomenclature, made the following statement.

An account of the establishment of a permanent International Commission on Anatomical Nomenclature was published in the Anatomical Record, 1936, vol. 67, No. 1, pp. 1–6. This Commission adopted the NA system of nomenclature as the basis for revision, and requested that any desired changes be submitted before September, 1937. (The NA list was printed in the Anatomischer Anzeiger, Ergänzungsheft zum Band 81, 1936.)

Accordingly during the present year our American Committee has studied the question as to what changes should be proposed. Many difficult problems are involved. While the committee has not yet reached a final decision, it has agreed upon some questions of general policy. One is that in order to reconcile conflicting views it will be desirable for the present to use synonyms for some of the terms, as (for example) many of those of position and direction.

Any member of the Association may propose desired changes in the terms listed by the NA, and our committee would be glad to have these proposals for consideration. As the time is short, any such proposals should be submitted promptly, with reasons therefor. It is hoped that the final report of nomenclature with the recommended changes can be formulated in time to submit it to the Executive Committee of the Association for review and criticism before it goes to the International Commission.

GEORGE W. CORNER,
Secretary

SPECIAL ARTICLES

PHOSPHORESCENCE OF CELLS AND CELL PRODUCTS

A BODY which continues to give off light for a visually observable period of time after exposure to radiation is generally said to be *phosphorescent*.[1,2] Phosphorescence of inanimate systems has been studied rather extensively;[3] little attention, however, seems to have been paid to the phenomenon in cells and cell products. Thus while phosphorescence of tissues was

[1] Personal letter from Dr. V. R. Haber.
[2] J. H. Hawkins, Maine Agr. Exp. Sta., Bull. 381, 1936, p. 120.

[1] R. A. Morton, "Radiation in Chemistry," 1928.
[2] S. E. Sheppard, "Photo-chemistry," 1914.
[3] P. Pringsheim, "Fluorescenz und Phosphorescenz," 1928.