

Observations showed that devil's shoe-string kills in a manner similar to that of derris. Its action is as quick or even more so, but it takes a somewhat longer time for the insects to die. It kills through paralysis and perhaps also through interference with respiration.

Field experiments on plant lice, *Aphis gossypii* and *Rhopalosiphon pseudobrassicae*, tent caterpillars, *Malacosoma americana*, yellow-necked caterpillars, *Datana ministra*, and Colorado potato beetle larvae, *Leptinotarsa decemlineata*, showed that the plant has considerable promise as a contact spray. But it possibly has greater promise for the control of various animal parasites. Almost perfect results were obtained on various species of fleas and lice; and encouraging results were obtained on cattle grubs, *Hypoderma lineatum*.

The supply at present is probably adequate for commercial purposes; but due to marked variations in the toxicity of the plant, it may not be possible to wholly utilize the available supply. Its commercial possibilities probably depend upon how cheaply it can be grown and harvested. A more detailed article will soon appear elsewhere.

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### BIOCHEMISTRY IN RELATION TO INTELLIGENCE

MANY people seem willing to believe that the chemicals in one's body may affect one's mind; but, apparently, scientific literature has been extremely vague or altogether silent on the subject, except in the case of glandular secretions, certain drugs and the like.

In an attempt to determine whether there is a characteristic chemical difference between "intelligent" persons and idiots, blood tests were made on 12 normal or superior persons and 20 idiots. All the subjects were adults of approximately the same age and health, and in each group there was an equal number of males and females. Differences in diet were made note of, and the time of day at which blood was taken and the interval elapsing before the tests were kept fairly constant.

The Clark-Collip modification of the Kramer-Tisdall method was used for the determination of calcium, with the result that practically every case came within the normal range; all the idiots were normal in their calcium-content.

The Fiske-Subbarow method was used for the determination of inorganic phosphate in blood plasma. The phosphate-content of the normal group was found to range between 3.25 and 8 mg per 100 cc of blood, but in only one case was it above 5.88 mg and in

that case a retest one month later showed 3.01 instead of 8 mg, suggesting that the excess was temporary. Without a single exception, the idiots had a high phosphate content, ranging from 5.98 to 12.48 mg and averaging 8.95 mg per 100 cc of blood, as compared with an average of 4.36 mg for the normal group.

No characteristic sex differences appeared in calcium or phosphorus, and there was no reciprocal relation between the amount of calcium and that of phosphorus, especially in the case of the idiots.

Several other experiments on this general subject are in progress.

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### THE LANGUAGE OF A CLERGYMAN

It was gratifying to find that my modest paper on "The Language of Scientists," printed in SCIENCE for December 5, 1930, excited some interest. I had very appreciative and helpful letters from various parts of the country and from men engaged in many different scientific specialties, showing that the points treated of were considered important and timely.

And now I have the valuable criticisms of two correspondents in SCIENCE for January 16, 1931. I enjoyed reading these as much as I suppose the writers enjoyed making their very appropriate comments.

It was hardly fair, however, to visit the errors of this one poor sinner on the whole class of clergymen. To be sure I know many of them who say "dioseize" for "dioceses," who make three syllables of "Reredos" and who even will put the accent on the penult of "deficit," but as a class I am not aware that they are particularly weak on rhetoric, as I seem to be. At any rate this clergyman will try to be more careful in future and to get some keen-nosed rhetorician to revise anything he may prepare for publication.

There is only one word to which I take exception. Dr. Theodore W. Darnell, of New York (I do not know him, but I am sure he must be a Litt.D.), speaks of my "castigation" of my fellow members. Now this was just what I had no intention of administering. I wrote in a humble and sympathetic spirit and hoped that none would feel that I was being censorious in the ordinary meaning of the word. In fact one of my correspondents voluntarily congratulated me on my success in this particular. But the effect of the written word depends, not only on the disposition of the writer, but also on that of the reader. This latter it is impossible to guard against entirely. To point out errors is neither a pleasant task nor likely to excite gratitude in one who feels that he is himself perhaps guilty of some of them. I did not spare myself and told of my own mistakes and said that *we* were all liable to err instead of charging, "*You are all likely to err.*"