

clear after sterilization and has given excellent results as a bacteriological medium.

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#### THE EFFECT OF FEEDING VELVET BEANS TO PIGEONS

THREE groups of three mature pigeons each were fed as follows:

Pen I: Ground velvet beans.

Pen II: Ground velvet beans plus aqueous extract of rice bran.

Pen III: Ground velvet beans plus aqueous extract of rice bran plus 10 per cent. butterfat.

The beans were fed dry and at the start were eaten readily. Pens II and III were given an aqueous extract of rice bran as the sole source of drinking water.

On the second day after feeding the beans, all birds showed ruffled feathers and a drawn-up, sleepy appearance. On the fourth day, one bird in Pen I and one in Pen II died. The remaining birds were in very poor condition. The loss in weight averaged about 80 grams.

Check birds receiving polished rice made slight gains during the same period, and were apparently in thrifty condition. On the fourth day the feed was changed to polished rice in all pens. One bird in Pen III was too weak to eat and was hand-fed on polished rice. Recovery was rapid in all cases.

Two pigeons were then fed ground velvet beans from another source. They rapidly developed the appearance of the birds in the former test. Both died on the eighth day.

Ground velvet beans were forced into the crops of two pigeons that had developed symptoms of severe polyneuritis. A decided improvement in condition was noticed. The birds died, however, on the following night in one case and on the second day in the other.

An aqueous extract of velvet beans furnished as the sole source of drinking water to pigeons receiving polished rice, apparently delayed the onset of polyneuritis, but did not entirely prevent it. The difference in appearance of the birds receiving the extract and of check birds receiving polished rice alone was striking. The feathers of the former remained smooth and glossy, while those of the latter soon became dry and rough looking. These results seem to

indicate at least a small amount of water soluble B in the beans.

An effort will be made to ascertain the cause of the ill effect.

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#### A CHEMICAL SPELLING MATCH

A UNIQUE modification of the old-time spelling bee was staged at the West Virginia University last May with rather remarkable success.

At the suggestion of the writer the chemical faculty of the university arranged to hold a contest among the 376 students taking the course in general inorganic chemistry, and this contest was to be a public match for the spelling of chemical formulæ of such compounds as are ordinarily included in a first year's college course in chemistry.

These students are normally divided into sixteen quiz sections, and it was evident that so many could not be brought on the floor at the same time for spelling. Therefore, eight preliminary matches were held at seven o'clock in the evening of the final match, where two sections, in charge of two instructors, spelled against each other, and then a number chosen from each of these groups, representing one out of every eight students, who became eligible to the final match.

The preliminaries lasted about one hour, after which all the students assembled in the armory and the winners lined up for the final contest. Professor Samuel Morris pronounced the words, and three well-known chemists, not connected with the department, acted as judges. For example, ortho phosphoric acid was given, and the student whose turn it was replied by saying " $\text{H}_3\text{PO}_4$ ."

Upwards of 700 formulæ were prepared for the instructors' use at the preliminaries, and then 50 to 60 additional formulæ in case of emergency for the final match. As a prize, Mr. J. F. Cadden, the winner, was presented with a copy of Mellor's "Modern Inorganic Chemistry." The last five students to spell down were presented with attractive certificates bearing the university seal.

A great deal of enthusiasm and rivalry be-