

bent at right angles. After passing hydrogen through the flasks for half an hour the inlet was closed with a pinchcock and the outlet with a mercury trap. The flasks were then incubated at 40°. In one series carbon dioxide was employed to expel the air from the flasks instead of hydrogen.

After two weeks the contents of each flask were used for a furfural distillation in the usual manner. The results are shown in Table XVII.

From these results it is apparent that the intestinal bacteria destroy pentosans under anaerobic conditions, and here again the degree in which these are destroyed varies with the plant and in the same order as was observed in the feeding experiment.

These experiments warrant the conclusions:

1. That the pentosans of the corn plant are more easily attacked and disappear from the digestive tract of the cow in a greater degree than do those of the wheat and oat plants.
2. That the methyl pentosans of these three plants are less resistant to the agencies operating in the digestive tract than are the simple pentosans.
3. That in the artificial cultures of fecal bacteria from the cow the behavior of the pentosans from corn, wheat and oats is the same as is observed in feeding experiments, *viz.*, those of the corn plant are less resistant than those of the oat, and those of the oat less resistant than those of the wheat.

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### NEW BOOKS.

**Experimental Dairy Bacteriology.** H. L. RUSSELL AND E. G. HASTINGS. Boston: Ginn & Co.

This little work of 146 pages is designed solely for students in practical Dairy Bacteriology. Although it gives brief statements as to the significance of some of the facts presented, its aim is to simply give a guide for experimental work, rather than any instruction in the general subject of dairy bacteriology. The subjects covered are those which would be naturally included in such a laboratory course. The structure and use of a microscope, the preparation of media for bacteriological work, the isolation of bacteria, the purification of cultures, etc., as well as the application of these various facts to the problems of the dairy. An appendix gives the bacteriological chart of the American Bacteriological Society and a glossary of terms used, as well as tables for converting the centigrade to the Fahrenheit scale and the metric into the English scale of weights and measures. The book is neatly printed and cannot fail to prove useful to laboratory students in this increasingly important subject.

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