QUOTATIONS

DYES FOR BACTERIOLOGY

BACTERIOLOGISTS in this country and in the United States of America are anxious about the supply of chemical dyes used in their work. Animal tissues and the microbes which may infest them, as seen under the microscope, present to the eye an almost uniform appearance of pale translucency. A skilled treatment with dyes and mordants reveals the otherwise invisible differences of structure and composition. Particular cells and granules, bacteria and spores, have affinities for particular stains, and betray their presence by the colors they absorb. The presence, the quality, and even the phase of an infection or of a morbid state are thus detected, and the processes are a necessary part of research, diagnosis, and treatment. But the reactions are delicate, and their value depends on a high purity and standardization of the reagents employed. The materials are almost entirely the aniline dyes used in textiles. Before the war Grübler in Germany had examined these and selected those that might be of use to biologists. The total bulk of the trade is very small, and the German manufacturer had taken so much trouble to standardize his products and secure their purity that he had a practical monopoly and was able to charge a high but legitimate price. When the war came, in 1914, a few fortunate institutions had in hand a stock of the Grübler reagents sufficient to meet their wants. But the greater number of biologists were soon in difficulties. Here and in the United States several manufacturers, partly from patriotic motives and partly from the attraction of the great difference in price between the crude textile dyes and the microscope stains, began to supply the demand. There is no reason to suppose that their output was inferior to the German products. But it varied from manufacturer to manufacturer in its precise qualities. The users got results which were not exactly comparable with those obtained from the Grübler products or with each other. The total demand, moreover, is so small in bulk that it is hardly worth distributing. The situation has given rise here and in America to a desire for the free importation of German bacteriological stains, on the one hand, and, on the other, to fresh efforts to maintain national independence in this branch of scientific work. The Society of American Bacteriologists is endeavoring to secure cooperation in determining on a reliable standard brand of each kind of stain, and in discouraging the marketing of variants. A similar course in this country would be very convenient.—The London *Times*.

SPECIAL ARTICLES

THE SECOND-YEAR RECORD OF BIRDS WHICH DID AND WHICH DID NOT LAY DURING INDIVIDUAL MONTHS OF THE PULLET YEAR

The egg output of the commercial poultry plant is due in part to birds in their first and in part to birds in their second year. At some time during the first year the number of pullets is reduced to the number which is to be retained as hens during the second year.

It would be of obvious advantage if the birds sold from the flock as pullets could be those which if retained would make the poorest record in their second year. If the birds destined to be the highest producers in the second year could be selected on the basis of some criterion recognizable in the first year, it should be possible to raise the average production of the flock as a whole by increasing the average production of the hens.

In the course of a general investigation of the problem of the prediction of the egg production of the domestic fowl from the records of short periods, we have availed ourselves of the opportunity of considering the relationship between first and second year laying activity presented by the data of the Vineland International Egg Laying and Breeding Contest. As one phase of this work[1] we have sought to determine to what extent the simple criterion of *laying* versus *not laying* in any month of the first year may be used

[1] Other phases of the investigations will be reported in detail elsewhere.