

in spite of the fact that more than 50 per cent. of owner-farmers are free from debt. It is satisfactory to record that Canadian systems of credit—especially short-time credit—receive favourable comment.

The most significant statement in the book is that mortgage credit agencies, however beneficial their intentions, are not to be compared in their usefulness and service to farmers with the agricultural colleges and experiment stations throughout the country. These institutions are helping the farmer to increase his income in various practical ways, and if they cannot rescue him from the dilemma in which he finds himself as the result of easier mortgage credit terms and conditions, he will find no relief anywhere. In view of the author's position of economist on the Federal Farm Loan Board, this considered statement of the limits of direct financial aid to agriculture must carry great weight.

Although the book does not discuss British conditions, it contains the material for useful analogies, as well as much of direct interest to agricultural economists on the eastern side of the Atlantic.

B. A. K.

Our Bookshelf.

Abridged Scientific Publications from the Research Laboratories of the Eastman Kodak Company. Vol. 8, 1924. Pp. 155 + vi. (Rochester, N.Y.: Eastman Kodak Co.; London: Kodak, Ltd., 1925.) n.p.

THE Research Laboratories of the Eastman Kodak Company have been in full working order for about twelve years, during which time investigations have been carried on by the staff, not only on matters directly concerning the practice of photography and the manufacture of the materials and apparatus required for it, but also on various chemical and physical matters that appear at first sight to be rather remote from this subject. Time will doubtless justify this wide view of what is desirable. The results are published in numerous scientific journals as may be suitable in each case, but the papers, slightly abridged, are all brought together in the series of volumes of which this is the most recent.

This volume contains full and often lengthy abstracts of the 28 papers published last year. Many of these have already been referred to in our columns, and others are of interest only to the manufacturers and users of films for "motion pictures." Mr. F. E. Ross has dealt with the mensurational characteristics of photographic film, because film is now used for so many scientific purposes where the sensitive surface must be flexible. It appears that, generally speaking, films may show no greater distortion than glass plates, and that the different kinds of film vary somewhat. The relationship between time and intensity of illumination in photographic exposure is investigated in considerable detail and under considerably improved experimental conditions as compared with earlier work on this subject, by Messrs. L. A. Jones and E. Huse. Messrs. A. B. Corey and H. Le B. Gray, in seeking to prepare a

standard cellulose, find that by treating the product obtained as described in a previous communication with 1 per cent. acetic acid solution for two hours and subsequent washing, the ash is reduced to a very low quantity without apparent injury to the material. The reduction is stated to be "from 0.12 to 0.4 per cent." This misprint and a figure upside down at p. 16 show that more revision is desirable.

- (1) *A Laboratory Manual of the Anatomy of the Rat.* By Prof. Harrison R. Hunt. Pp. viii + 123. (New York: The Macmillan Co., 1924.) 6s. net.
 (2) *Laboratory Manual of the Foetal Pig.* By Prof. W. J. Baumgartner. Pp. xii + 57. (New York: The Macmillan Co., 1924.) 4s. 6d. net.

THESE manuals have both been written as guides to mammalian types which have been found suitable for laboratory purposes in the two universities at which the respective authors are engaged in teaching zoology. The use of the foetal pig as a type for dissection must of necessity be limited to universities and schools situated in towns, such as Chicago and Kansas, where packing plants are available as sources of supply, but the use of the rat has wider possibilities, and, for that reason, Prof. Hunt's manual will be specially welcome in Great Britain. Prof. Baumgartner's manual is modelled on Marshall and Hurst's "Practical Zoology," that is to say, clear directions for dissection are picked out in italics throughout. Prof. Hunt, on the other hand, has chosen to give a more or less connected account of the various systems and organs of the rat in which instructions for dissection are given in their appropriate places, but only incidentally. The former style has so many advantages in a book designed for the use of students that one almost regrets that Prof. Hunt did not adopt it for his book, particularly as it is almost sure to have a wider field of service.

A serious defect in both books is the absence of illustrations. This is deliberate on the part of Prof. Hunt, who believes that it is better for the student to get his visual impressions from the animal itself. While appreciating this point of view, it cannot be doubted that clearly reproduced figures are a wonderful aid to dissection and are worth many pages of the most carefully written text. The authors may, perhaps, reconsider the question should further editions be called for. The addition of figures would enhance the usefulness of these two excellent manuals enormously.

The Psychology of Emotion, Morbid and Normal. By Dr. John T. MacCurdy. (International Library of Psychology, Philosophy and Scientific Method.) Pp. xvi + 589. (London: Kegan Paul and Co., Ltd.; New York: Harcourt, Brace and Co., Inc., 1925.) 25s. net.

THE author expresses a hope that his readers may be drawn not only from psychiatrists and psychologists but also from laymen interested in psychological problems. If this hope be fulfilled, the ranks of the former will be recruited from the latter. A person who has read and understood this book and studied the work of the authorities referred to in it can scarcely be styled a layman thereafter. Should he find his interest flag, the short but excellent chapter on treatment may be relied on to revive it.