

wood required for a ton of sulphite pulp, and in addition the conversion and handling costs would be higher.

In conclusion, the authors express the opinion that, on account of the relatively high cost of the raw material and the expense of converting it into pulp, the manufacture of paper from maize stalks is not at the present time a commercially feasible venture. Only if sufficiently profitable uses could be developed for the pith and fine fibrous material left after separating the cortex, could the stalks become of interest to the paper-maker. (*Bull. Imp. Inst.*, Jan. 1936).

This is Japan's way. Japan has come forward with a new plan to bring relief to her unemployed. We understand that the Japanese Bureau of Social Affairs has recently established a scheme of camps for men engaged on unemployment relief works. The object is to give the unemployed the instruction they require, particularly with a view to occupational re-training. Expenditure on the scheme in 1936 will amount to 3,570,000 yen. About 90,000 unemployed workers without means drawn from the six largest cities of Japan, will be engaged on the relief works for at least six months and housed in the camps. Arrangements have been made for 60 teachers to supervise camp life and instruct the men. The authorities will do their best to provide men leaving the camps with employment corresponding to their newly acquired abilities; and special steps will be taken to encourage them to emigrate. (*Mys. Ec. Journal*, Jan. 1936).

Production of Artificial Silk continues to increase. The German Artificial Silk Industry, concerning which official figures have now been published, experienced a further marked up-swing. Total production was 48.2 million Kg. or an increase of 42 per cent. over 1933 and 62 per cent. over 1932..... Sales of German establishments have increased considerably, indeed from 33.6 million Kg. in 1933 to 52.3 million Kg. in 1934 or round about 56%. Exportation has however, declined. (*Ind. and Eng. Chem.*, Vol. 14, No. 3, P. 38).

For the Fads.

Methusaleh ate what he found on his plate,
And never, as people do now,
Did he note the amount of calorie count.
He ate it because it was chow,
He was not disturbed, as at dinner he sat,
Destroying a roast or a pie,
To think it was lacking in granular fat
Or a couple of vitamins shy.
He cheerfully chewed every piece of food,
Untroubled by worries or fears,
Lest his health might be hurt by some fancy dessert,
And he lived over nine hundred years!

(*Scient. Amer.*, March 1936, P. 120).

What an escape! It is fortunate for human beings that one ancient insect became extinct. Fossil remains discovered near Elmo, Kansas, by Dr. Frank M. Carpenter of the Howard Museum of comparative Zoology, show that this particular dragon fly which lived 150,000,000 years ago, was nearly two and a half feet long. (*Sc. Amer.*, March 1936).

ABSTRACTS

Studies on the coconut palm III. Husk. A. The manurial value of coconut husk ash. by M. L. M. Salgado—*Trop. Agri. Cey.* March 1936, P. 131. A paper that records the analyses of coconut husk ash carried out in order to assess its manurial value. The author finds that the coconut husk ash contains as much as

35% of water soluble potash and about 2% of phosphoric acid, in addition to other ingredients like calcium (2%) carbonates (13%) Magnesium (2%) Sodium chloride (23%) etc.

Further as the result of an interesting experiment, in which coconut husks were ashed before and after retting them, it was found that as much as 50% of the potash present in the husk, was lost during retting, (ie.) by mere solution in the retting water. The author therefore advises that where husks have to be ashed for use as a manure, they must be husked when they are fresh and not after undue exposure, as monsoon rains received during the period of storing the husks in a corner of the garden, are likely to leach out the soluble potash.

The author computes that according as the soil is loamy or gravelly the yield of potash from 1000 husks, will vary from 10 to 15 lbs. M. R. B.

Review.

Principles of Forest Entomology: By S. A. Graham. Pages 1-339 (with figures) 1929 (First Edition). Published by *Mc Graw-Hill Book Company Inc.*, New York and London.

This book forms one among a series of *Mc Graw-Hill* publications in the Zoological Sciences edited by A. Franklin Shull; and is intended for all interested in the protection of forests and forest products.

The subject matter of the book is divided into 17 chapters as follows:—
Chapter I. Introduction wherein the author deals with the importance of forest entomology, losses due to forest insects, scope and sub-divisions of forest entomology; *Chapter II.* Historical review of the development of Forest Entomology in Europe and in America; *Chapter III.* Biotic Potential dealing with rate of multiplication, sex-ratio and calculation of Biotic Potential; *Chapter IV.* Environmental resistance such as physical factors, nutritional factors, plant physiological factors, and biotic factors; *Chapter V.* Insect abundance dealing with biotic balance and devices to increase abundance; *Chapter VI.* Direct control of tree insects dealing with purpose and cost of control and classification of control measures, direct control by biotic methods; *Chapter VII.* Direct control by chemical methods dealing with feasibility of chemical methods, application of insecticides and the classification of insecticides; *Chapter VIII.* Indirect control of tree insects dealing with control by modification of food-supply, modification of moisture conditions, and modification of temperature; *Chapter IX.* Indirect biotic methods and silvicultural practices dealing with indirect biotic methods such as the use of competition, control by parasites and by predators and silvicultural practices; *Chapter X.* Leaf eating insects dealing with defoliation, Lepidopterous leaf eaters, Coleopterous leaf eaters and Hymenopterous leaf eaters; *Chapter XI.* Meristem insects of the terminal parts dealing with groups of meristem insects, insects feeding on the tips and feeding on the roots; *Chapter XII.* Meristem insects of the cambium region dealing with cambium borers and bark beetles; *Chapter XIII.* Cambium-wood insects viz., pests of living trees and pests of drying trees and logs; *Chapter XIV.* Wood destroyers such as unseasoned wood insects, moist dead-wood insects, marine wood borers and dry wood insects; *Chapter XV.* Sapsucking insects such as Hemipterous insects, some Homopterous insects and scale-insects; *Chapter XVI.* Insectivorous parasites such as entomophagous micro-organisms and parasitic insects; *Chapter XVII.* Insectivorous predators viz., predatory insects and other predators.

At the end there is an exhaustive bibliography (pages 306—317) given chapter by chapter, about 300 references in all. And there is an index running from pages 319—339.