injured and remains unproductive. Since shortage of carbohydrate is associated with this disease, the author has presented the results of his investigations into the rate of carbon assimilation under field conditions by leaves of *Coffea arabica* growing in the Northern Province of Tanganyika Territory.

The apparent rate of assimilation for whole trees as well as the diurnal march of assimilatory rate for single attached leaf are determined under different degrees of sun and shade and full data are presented which show that the rate varies directly when the intensity of light is low but is inversely proportional in high light intensity. The total daily assimilation is greater under a moderately shaded condition than in full sunshine, and that during cloudy weather, the assimilation rate remains at a fairly constant though low value, while in the sun the rates show a large depression during the midday hours. These studies show why the coffee plant assimilates better under shade and why the plant can stand heavy bearing better under shady conditions than under exposure to intense sun-light.

V. T. B.

The control of the leaf spot disease in young Coconuts. Tammes, P. M. L. *Landbouw*, 13 : 69—73 (1937). The writer's observations in Java indicate that freedom from grey spot or leaf blight of coconuts (*Pestalozzia palmarum*) : R. A. M., xv, p. 15) may be ensured by the provision of light shade, e. g., *Sesqania grandiflora* cuttings, during the first two years after planting. Such conditions frequently obtain in native plantings, where the seed nuts are kept under shade in the gardens or planted out in maize fields. In a test in 1936 the incidence of infection in shaded plots was only 2 per cent. compared with 46 per cent. in exposed sites. Excessive shade, however, should be avoided as tending to weaken the development of the plants. (*Rev. Appl. Mycol.* 16 : 529).

Gleanings.

Controlling Growth of Weeds. Sulphuric acid spray as a method of controlling the growth of weeds in fields of grain is gaining ground in the United States. Tests covering several years and several thousand acres of grain fields in California have demonstrated the effectiveness of this method. During the present season more than 6000 acres are being kept free from weeds by spraying with solutions of sulphuric acid which kill weeds but do not injure the growing grain. This is a meagre beginning when in California alone there are more than half a million acres that could be benefited and when the vast grain fields of the mid-west and the Pacific Northwest have not yet been touched. In France the treatment is already applied to more than 500,000 acres and its use is growing in England and on the Continent. The California development includes testing new, more efficient types of sprayers to cover larger areas more effectively. (*Scientific American*, September 1937).

Treat ulcers by continuous drip of milk into stomach. A continuous feeding of milk, drop by drop, into the patient's stomach is the new method of treating stomach ulcers reported by Dr. Asher Winkelstein of New York.

Frequent feeding of small amounts of milk and cream has for years been part of the standard medical treatment of stomach ulcer. The milk, together with alternating doses of alkaline powders such as bicarbonate of soda, is given to neutralize the acid normally secreted by the stomach but which irritates the ulcer and prevents its healing.

Dr. Winkelstein's modification of this method into a constant feeding of milk, a drop at a time through a tube, is based on studies of stomach secretion, especially at night.

The importance in connection with stomach ulcers of nervous over-secretion of acid by the stomach was emphasised by Dr. Winkelstein.—Science Service. (*Scientific American*, September 1937).

Oil and Cake Products from Coffee. It is stated that German chemists have been co-operating with the Brazilian authorities in order to discover uses for the surplus Brazil coffee crop and that the President of the National Coffee Department has received a report from the Brazilian technical representative in Germany reporting the success of an experiment for the extraction of subproducts from coffee. It is claimed that 13% of high quality oil has been extracted from coffee beans, compared with 20% extracted from soya beans, while the residue provides first class cattle cake. It is hoped that the discovery will in future prevent the unnecessary destruction of surplus coffee. (*Chemistry and Industry*, September 18, 1937.)

Review.

The Punjab Fruit Journal. Feroz Printing Works, Lahore.

The *Punjab Fruit Journal* is a quarterly journal and an organ of the Punjab Provincial Co-operative Fruit Development Board. It is perhaps the first of its kind in India, and the most important feature of the Journal is its bilingual character. The articles are published in English and in Urdu. The journal meets the keen demand that exists for popular literature on cultivation of fruit plants, and preservation of fruits. It aims at building up the fruit industry of the Punjab on scientific and economic basis and it has rendered much help in uniting the fruit growers, and keeping them informed of the beneficial activities of the Punjab Fruit Development Board.

In the third issue of this journal there are four interesting articles in English, namely, "Is there real danger of over-production of fruit in Punjab", "Some salient points about nitrogen carrying fertilizers". "Physiology and nutrition of pruning", and "Tomato juice—its preparation and preservation" and the notable items in the Urudu section are "Propagation of stone fruits", "Manuring of oranges", "List of fruit commission agents of U. P." and "Seasonal hints".

The annual subscription is low, being Rs. two only; it can be had from the Secretary, Punjab Provincial Co-operative Fruit Development Board, Lyallpur.

(J. S. P.)

Crop & Trade Reports.

Paddy—1937-38—First Forecast Report. The average of the areas under paddy in the Madras Presidency during the five years ending 1935-36 has represented 15·3 per cent. of the total area under paddy in India.

The area sown with paddy up to the 25th September 1937 is estimated at 5,893,000 acres. When compared with the area of 6,010,000 acres estimated for the corresponding period of last year, it reveals a decrease of 1·9 per cent.

The estimated area is the same as last year in Coimbatore and Tinnevelly; it exceeds the corresponding area of last year in West Godavari, Kistna, Kurnool, Cuddapah, Nellore, South Arcot, Salem, Tanjore, Ramnad and the Nilgiris. The decrease in area in other districts is generally attributed to insufficiency of rains and of water supply in tanks.

The first crop of paddy is being harvested in parts of Tanjore and on the West Coast. The yield is expected to be about normal. The condition of the standing crop is generally fair.