

The system is much less laborious than digging out the borers and far more amusing. A magneto somewhat more powerful than the writer's would no doubt be quite valuable to orchardists and commercial tree surgeons. (*Science, New Series*, Vol. 84, No. 2167).

Victor H. Schmidt, Kansas City, Missouri.

**Lucerne as a food for human consumption.** (*The South African Institute for Medical Research Laboratory Report No. 3. Johannesburg*).

The publication contains a summary of all the available knowledge on the subject. It deals about the history of lucerne cultivation in S. Africa, the chemical composition of the plant at various stages of growth and suggestions for using lucerne as human food. There are two useful appendices to the publication one dealing about the method of cultivation and the other containing suggestions regarding the value and methods of using lucerne as part of the ration for mine labourers.

Lucerne is remarkably rich in the antiscorbutic vitamin C, being about five times as rich as the same weight of orange juice. It contains a considerable amount of mineral matter, calcium and iron, about three times as much calcium as milk and twice as much iron as spinach. Besides vitamin C, it is also rich in vitamins A, D and E. There is also an appreciable quantity of proteins.

It is advisable to use only the leaves and young shoots as the stalks unless very young are apt to be fibrous. When it is chopped, it should be used as soon as possible and its vitamin C value diminishes rapidly when the cells are damaged. The leaves can be incorporated in a salad just like any other green stuff. It can be chopped and put in omelettes or in soups and stews. The leaves can also be cooked as spinach but in so doing the minimum amount of water should be used. It appears tea can also be made with the leaves. Experiments have shown that even a tablespoonful of chopped lucerne per boy is a useful addition to the ration and an ounce a day is regarded as a fully protective ration against scurvy even without the addition of other vegetables.

While it is admitted that, lucerne as usually grown for forage purposes, is apt to be somewhat coarse and lacking in flavour, it is however possible with sufficient attention to cultivation using rich soil and plenty of water to obtain a vigorous and tender growth which would make it more suitable as a vegetable.

K. R.

## Correspondence.

To The Editor, Madras Agricultural Journal.

Sir,

I shall be glad if you will kindly inform me whether the injury due to leaves of tamarind trees falling on a paddy field will be confined to that particular field or it is likely to be transmitted to other fields in case water from that particular field flows to the other fields.

PALGHAT,

1-9-36.

Yours truly,

O. M. MENON

### Reply.

The presence of tamarind trees in the vicinity of cultivation is generally considered undesirable owing to the acid nature of the leaves. It is well known that grass does not grow well under tamarind trees, since the leaves are supposed to make the soil acid in reaction.

In the case of paddy fields it is likely that the leaves falling on the field may be deleterious, but it is hardly likely that the acidity so formed will affect other fields, by water flowing into them.



the 17th when, a depression formed in the Bay of Bengal off the Orissa coast. This depression temporarily strengthened the monsoon in the Peninsula till about 20th after which period it became again weakened and remained so during the rest of the month. Three depressions caused the Bay of Bengal branch of the monsoon to remain fairly active and vigorous. A depression off the Orissa coast on the 23th caused a strong monsoon in the North Madras coast but this was not able to influence weather conditions in the rest of the Peninsula.

Rainfall was normal or in moderate excess in Circars and was generally in defect in West Coast, Ceded districts, South Madras and Mysore.

#### Weather Report for the Research Institute Observatory.

Report No. 8/36.

Absolute maximum in shade	...	90.0 F.
Absolute minimum in shade	...	66.5 F.
Mean maximum in shade	...	85.8 F.
Departure from normal	...	-2.1 F.
Mean minimum in shade	...	71.2 F.
Departure from normal	...	-0.5 F.
Total rainfall for the month	...	1.93"
Departure from normal	...	+0.94"
Heaviest fall in 24 hours (Recorded on 6-8-36)	...	1.25"
Total number of rainy days	...	4 days.
Mean daily wind velocity	...	5.3 M. P. H.
Mean humidity at 8 hours	...	73.9%
Departure from normal	...	+0.6%

**Summary.** The maximum and minimum temperatures were below normal. Rainfall was in excess by 0.94". The skies were moderately to heavily clouded. Humidity was slightly above normal. Dry weather conditions prevailed in the last week of the month.

P. V. R. & D. V. K.

## ADDITIONS TO THE LIBRARY

JULY 1936

### A. Books.

1. Soya bean. *Kale, F. S.* (1935).
2. The World Sugar Problem, 1926-1936. *Gutierrez, V.* (1935).
3. Garden Science. *Grainger, J.* (1935).
4. Your Flower Garden. *Day, H. A.* (1935).
5. Gardening in Towns. *Thomas, H. H.* (1936).
6. Modern Fruit Growing. *Seabrook, W. P.* (1933).
7. Back to the Land. *Orwin, C. S. & Darke, W. F.* (1935).
8. A Course of Study in Managing a Farm. *Lwark, A. T.* (1931).
9. Agrarianism: A Program for Farmers. *Cauley, T. J.* (1935).
10. Modern Production among Backward Peoples. *Graves, I. G.* (1935).
11. Labour in Agriculture. *Howard, L. E.* (1935).
12. Co-operation and the New Agricultural Policy. *Horace Plunkett Foundation Pub.* (1935).
13. Agricultural Education in Europe. *Int. Inst. Pub.* (1935).
14. Transactions of the Third International Congress of Soil Science, Vol. 3. (1936).
15. Humus. *Waksman, S. A.* (1936).
16. Milk Production and Control. *Harvey, W. C. & Hill, H.* (1936).
17. The World's Hand Book of Dairying. *Murray, A. H.* (1936).
18. Dairy Cow Testing Throughout the World. *Int. Inst. Pub.* (1935).
19. The Poultry Keepers' Text Book. *Brown, E. T.* (1934).
20. Elementary Veterinary Science for Agricultural Students. *Thompson, H. & Duncan, A. C.* (1935).
21. The Beginnings of Plant Hybridization. *Zirkle, C.* (1935).
22. The Cultivated Races of Sorghum. *Snowden, J. D.* (1936).
23. Die Fusarien. *Wollenweber, H. W. & Reinking, O. A.* (1935).
24. Plant Viruses. *Smith, K. M.* (1935).
25. Essentials of Physiological Chemistry. *Anderson, A. K.* (1935).
26. Bee Keeping (I. C. A. R. Misc. Bull. 6). *C. C. Ghosh.* (1936).
27. Embryology and Genetics. *Morgan, T. H.* (1934).
28. Practical Zoology. *Hewar, H. R.* (1935).
29. Flour Milling Processes. *Scott, J. H.* (1936).