

(3.) AMERICAN WOOD-PRESERVERS' ASSOCIATION STANDARD SPECIFICATION FOR HIGH-BOILING OR ANTHRACENE OIL FOR BRUSH OR SPRAY TREATMENT.

(1.) The oil shall be a pure distillate of coal-gas tar or coke-oven tar. It shall comply with the following requirements:—

(2.) It shall be fluid at 15° C. and crystal-free at 38° C.

(3.) It shall not contain more than 1 per cent. of water.

(4.) It shall not contain more than 0.5 per cent. of matter insoluble in benzol.

(5.) The specific gravity of the oil at 38° C. compared with water at 15.5° C. shall not be less than 1.09 nor more than 1.13.

(6.) The distillate, based on water-free oil, shall be within the following limits: Up to 235° C., not more than 2½ per cent.; between 235° C. and 300° C., not more than 20 per cent.; up to 355° C., not less than 50 per cent.

(7.) The residue above 355° C., if it exceeds 35 per cent., shall have a float test of not more than 50 seconds at 70° C.

(8.) The oil shall yield not more than 2 per cent. coke residue.

(9.) The foregoing tests shall be made in accordance with the standard tests of the A.W.P.A.

#### BIBLIOGRAPHY.

- (1.) SHRIMPTON, E. A., Chief Engineer, N.Z. Post and Telegraph Department. Private communications.
- (2.) CRAWFORD, J. M. Preservation of Wooden Poles. The Institution of Engineers, Australia, Proceedings, 1924.
- (3.) HICKS, P. R. Service Tests of Butt Treated and Untreated Poles. Manual, American Wood-preservers' Association.
- (4.) U.S.A. FOREST PRODUCTS LABORATORY. Technical Notes: F. 33, the Comparative Durability of Green and Seasoned Timber.
- (5.) BRADLEY, ORTON, Charteris Bay, Lyttelton. Royal Commission on Forestry, 1913.
- (6.) STEPHENS, H. B. Experimental Timber-preservation in South Africa. *South African Journal of Industries*, October, 1924.
- (7.) WEISS, H. F. The Preservation of Structural Timber. 2nd ed., McGraw Hill, 1916, page 73.

## COLLAR-ROT OF PEAS.

### INCIDENCE OF THE DISEASE.

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DURING the past four or five years a disease—now locally known as collar-rot—has become common in the pea crops of New Zealand, but apparently it was not until the 1924–25 season that it reached sufficient importance to warrant inquiry from seed merchants and growers. Evidence supplied by farmers indicates that the extent of diseased crops fluctuates from year to year, but the amount of damage which occurs during any season shows the necessity for a thorough investigation into the cause.

Although the occurrence of an unhealthy condition of some crops has been known for some years, it was not until October, 1924, after an examination of a Wellington-grown crop of garden-peas which was suspected of being diseased, that a preliminary investigation was begun. Later, in November, specimens of affected plants were received from Marlborough and the Hutt Valley (Wellington), and inspection of