a role in the defensive mechanism of the wheat plant against the rust organism.

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A Powdery Mildew (*Leveillula taurica* (Lev.) Arn.) on Cotton in the Sudan

IN December 1955 a powdery mildew hitherto unrecorded in Africa on cotton appeared on several Egyptian (*Gossypium barbadense* L.) as well as American (*G. hirsutum* L.) varieties at Shambat, Khartoum Province. The pathogen, *Leveillula taurica* (Lev.) Arn., is a common parasite upon numerous other cultivated and wild plants in the Sudan[1], becoming more extensive during the winter months. Although the disease was confined mainly to young cotton plants grown in the out-of-season period—for genetical work—and although it was severe only on the cotyledon and first leaves, but scarcely affecting the upper fourth or fifth leaves, the quick spread of this parasite upon the cotton varieties which are most cultivated and highly valued has caused much concern. So far the disease on cotton has not been recorded in the Gezira, where the bulk of the Sudan Egyptian cotton is grown.

From cross-inoculation tests it was demonstrated that the source of infection must have been of local origin, probably from a diseased crop of *Faba bona* Medic (*Vicia faba* L.) which was growing in the vicinity, or else from a ubiquitous shade-loving weed, *Euphorbia heterophylla* L. Several varieties of *G. barbadense* (for example, Domain Sakel and *X* 1730, the two varieties grown in the Gezira and the pump schemes of the Blue and the White Nile) and of *G. hirsutum* became infected when artificially inoculated from diseased leaves of *E. heterophylla* or *F. bona*.

Another interesting aspect of this work, therefore, is the evident tendency of this mildew towards non-specialization. Several other cross-inoculation tests were carried out; for example, from cotton on to *E. heterophylla*, *F. bona*, etc., with positive results in most instances. Since all the artificial inoculations were from lesions or even whole infected leaves, it may be argued that we might have been dealing with a mixed- and not a single-strain inoculum. This possibility, however, is somewhat remote because, so far as is known, physiological races arise primarily as a result of interchange of nuclear material during sexual reproduction. *L. taurica* rarely produces cleistothecia upon its wide range of host species, and the sexual state has not been observed upon any of its hosts (except on *Carthamus tinctorius*) in the Sudan. Furthermore, the even coverage obtained in most cross- and back-inoculations render the possibility of two or more strains being present in every tested sample of inoculum somewhat remote.

These results, which will be published fully elsewhere, do not agree with those of Zwirn[2] or of Kamat and Patel[3], who report that *L. taurica* exhibits highly specialized traits of 'specific' rank. Although it is generally accepted that the powdery mildews, like the rusts, are obligate parasites and that they may have numerous physiological races[4], nevertheless evidence to the contrary has often been cited[5].

It is probable, therefore, that the annual appearance of *L. taurica* on winter crops in the Sudan arises from primary conidial infection from the susceptible weed species, for example, *E. heterophylla*, which 'carry' the disease all the year round.

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Abbreviations for Iodinated Amino-acids and Derivatives from the Thyroid Gland

THE use of abbreviations for the designation of compounds on chromatograms or autoradiographs has recently led to some confusion in the thyroid field, because of the variety of symbols used by different workers. At the Ciba Foundation Colloquium last June on the "Regulation and Mode of Action of Thyroid Hormones", a discussion was held in which agreement was reached on suitable symbols for a number of compounds: namely, the iodinated thyronines and tyrosines. This discussion will be published in due course. Meanwhile we desire to direct the attention of those engaged in research on the thyroid to these agreed symbols and to a few additional symbols for compounds which might be found among thyroid hormones or their metabolites.

Thyroxine	T_4	Monoiodotyrosine	MIT
Triiodothyronine	T_3	Tetraiodothyropyruvic acid	KT_4
Diiodothyronine	T_2	Triiodothyropyruvic acid	KT_3
Monoiodothyronine	T_1	Tetraiodothyroacetic acid	TA_4
Diiodotyrosine	DIT	Triiodothyroacetic acid	TA_3

If the writer wishes to distinguish between two isomers, then the symbol can be preceded by numbers indicating the positions of iodine (halogen) atoms in the two benzene rings of thyronine—thus, the three diiodothyronines would be 3 : 5-T_2, 3′ : 3′-T_2 and 3′ : 5′-T_2.

We feel that much would be gained if all workers in this field agreed to use the same symbols for the thyroid hormones, their precursors and derivatives.

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