and 2 with awns 1 to 9 mm. (inconstant manifestation). The 2 latter bred true in the third generation. Of the 4 former one bred pure for 7 to 9 mm. and the 3 others segregated again giving a total of 248 plants with awns of constant length (7–9 mm.) and 82 with awns of inconstant length (1–9 mm.). An analysis of panicles of the inconstant length type shows the following distribution in awn length within the earhead (average of 5 panicles).

9 mm.	and below	.. 133
7 mm.	„	.. 340
5 mm.	„	.. 481
3 mm.	„	.. 753
1 mm.	„	.. 385

This large representation in every group of awn length, gives the earhead its checkered appearance due to the inconstancy in the length of the awn.

It will thus be seen that in *S. guineense*, Stapf the manifestation of the awn is inconstant in length varying within wide limits and that this type of inconstant awn is a monogenic recessive to the common manifestation of awn length, which is in well-defined and easily classifiable length groups.

G. N. Rangaswami Ayyangar.
T. Venkataramana Reddy.
Millets Breeding Station,
Coimbatore,
May 23, 1940.

Distillery By-product—Yeast

A by-product in the alcoholic fermentation of molasses, yeast is obtained as a deposit mixed with calcium salts, and is sufficiently rich in nitrogen, phosphate and potash to be used as manure alone or as admixture with compost. The yeast occurs also in suspension in the fermented solution to the extent of 0·75 per cent. by volume, which can be recovered by centrifuging. Together, the yeast takes up 70 per cent. of the nitrogen present in the fermenting liquid; 93 per cent. of the phosphate and 3·2 per cent. of the potash in the molasses are also utilised. Removal of suspended yeast by centrifuging the fermented wash, prior to distillation, is good practice as it reduces the fouling of distilling plates. The spent wash or slop, then, contains the rest of the salts mainly potash which is recovered conveniently by evaporation.

100 tons of molasses on fermentation, deposit 6 tons of yeast sludge which after washing and settling yield 2 tons of air dried yeast. A proximate analysis of the yeast and the distribution of N, P and K_2O are given in Tables A and B.

Table A

	Molasses %	Dry Yeast %	Slops (free from Yeast) %
Nitrogen ..	0·5	8·5	0·05
Phosphate ..	0·2	3·5	0·003
Potash ..	3·5	2·1	0·83

Table B

Molasses + Am. Salt	Yeast		Slops
	Deposit	Suspension	
100 + 0·7 tons	2 tons	3·33 tons	91,000 gals.
Nitrogen, 1,434 lbs.	380 lbs.	634 lbs.	420 lbs.
P_2O_5, 448 lbs.	156 lbs.	262 lbs.	30 lbs.
K_2O, 7,840 lbs.	94 lbs.	157 lbs.	7,589 lbs.

The yeast deposit is generally washed out in distilleries. The recovery of this yeast as a supplementary nitrogenous and phosphatic fertiliser would be worth while.

Y. K. Raghunatha Rao.
Distillery, Mysore Sugar Co.,
Mandya,
May 18, 1940.

On *Corticium album* of Dastur

In 1938 Dastur observed some orange trees at Burhanpur, the lower parts of which were covered by a *Corticium*. The mycelium was wholly superficial, a few hyphæ filling the crevices formed by the cracking of the bark,

Dastur[1] (1940) considered it to be different from *Corticium koleroga* (Cooke) v. Höhnel or *C. salmonicolor* B. and Br. both of which have been recorded on *Citrus* and are parasitic in nature. He submitted the fungus to Dr. H. S. Fawcett for opinion who wrote that it was something with which he was not familiar. Dr. J. N. Couch to whom the specimen was also sent, found it impossible to pass judgment on material preserved in formalin but considered it safe in describing it as a new species, and the name *Corticium album* has been proposed for it by Dastur (1940).

Saccardo lists 413 species of *Corticium* up to the year 1925 and since then more species have been described. Monographic studies on the genus have been published by von Höhnel and Litschauer (1906–08)[2] and Burt (1926)[3]. It was found by von Höhnel and Litschauer (1906)[4] that many determinations of *Corticium* spp. in Schroeter's 'die Pilze' are incorrect and they state (1906–08) that there are several misdeterminations in the *exsiccatae* distributed by Rabenhorst, Saccardo, Sydow, von Thümen and others. Rogers (1935)[5] is of the opinion that there has been a heterogeneous accumulation of species within this genus. Corticiums are generally saprobes or facultative parasites (Dastur's fungus is only an epiphyte) and host specialization can hardly be assumed to exist. The task of determining species or of establishing new species in this genus is therefore difficult and has been a pit-fall to many mycologists. The status of Dastur's fungus can be accurately decided therefore only by a comparison of it with type specimens or *exsiccatae* revised by von Höhnel and Litschauer (l.c.).

Dastur followed Clements and Shear (1931)[6] in assigning the fungus to the genus *Corticium* but since that work was published, the basidial morphology of the Thelephoraceae has been critically studied by Rogers (1934)[7] who (1935) has proposed one new genus, *Ceratobasidium*, and accepted another, *Botryobasidium* Donk, into which have been merged several species formerly included in the genus *Corticium*. But assuming that Dastur's fungus is a *Corticium*, the name *C. album* is not tenable, for it had been used by Britzelmayr (1897)[8] for a *Corticium* occurring on oak logs at Augsburg, Bavaria. If Dastur's fungus is a new species, then he will have to choose another name for it and, incidentally, supply also a latin diagnosis.

B. B. Mundkur.

Imperial Agricultural Research Institute,
New Delhi,
May 23, 1940.

---

[1] Dastur, J. F., *Ind. J. agric. Sci.*, 1940, **10**, 89.

[2] Höhnel, F. V., and Litschauer, V., *Sitzb. Akad. Wiss. zu. Wien. Math. Nat. Kl.* Bd. 1906-08,115-17, I-III.

[3] Burt, E. A., *Ann. Mo. bot. Gdn.*, 1926, **13**, 173.

[4] Höhnel, F. V., and Litschauer, V., *Ann. mycol. Berl.* 1906, **4**, 288.

[5] Rogers, D. P., *Univ. Iowa Studies in Nat. Hist.*, 1935, **17**, 1.

[6] Clements, F., and Shear, C. L., *Genera of Fungi*, New York, 1931, p. 161.

[7] Rogers, D. P., *Univ. Iowa Studies in Nat. Hist.*, 1934, **16**, 160.

[8] Britzelmayr, M., *Bot. Zbl.*, 1897, **71**, 95.

Nitric Nitrogen in Soils under Cotton

Madhok and Fazal-ud-din[1] suggest a probable cause of the partial failure of cotton in the Punjab from their observations on the nitric nitrogen content of soils under cotton. This evidently means that they believe the nitric nitrogen status of the soil under cotton and the yields to be in some way correlated. Two questions thus arise: (1) Is the nitric nitrogen content of the soil at any time a reliable measure of the fertility or crop-producing power of the soil? (2) If so, have Madhok and Fazal-ud-din adduced any substantial evidence in answer to this question?

We may, in the first place, refer to available literature in regard to question No. 1. There is abundant evidence to show that the nitrate content of the soil under crop is influenced by such a large number of factors that so far it has proved useless as a reliable