

## LETTERS TO THE EDITOR

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## Garro Hill Cotton

IN the course of testing samples of cotton at the Technological Laboratory received from different parts of India, a sample of Garro Hill cotton from Assam was subjected to fibre and spinning tests. These tests revealed that this cotton possesses a number of exceptional features which are described below as they may be of interest to those working on cotton. The sample in question was supplied by the Deputy Commissioner, Garro Hills, Assam, to whom the writer is also indebted for the relevant agricultural details.

This cotton is grown in the northern half of the Garro Hill District. The soil is of the sandy loam and black clay type and the seed is sown in April/May. The picking is done in January and February nearly eight to nine months after sowing, while from May to September the crop receives a very heavy rainfall, which, in the current year, amounted to nearly 112 inches. There was, in addition, a rainfall of 7½" in April and over 4" in October; the total rainfall in the current year being nearly 124 inches.

The seed of this cotton is somewhat larger

than that of *desi*-type and is densely covered with lint. The ginning percentage was found to be 49.8, the lint from 100 seeds weighing 8.05 grams, while the seeds themselves weighed 8.1 grams. The high ginning percentage is especially noteworthy.

The results of the fibre tests made on this cotton are given below in Table I.

TABLE I  
*Fibre Particulars*

1. Fibre-Length Distribution (Balls Sorter):			
Mean group length in eighths of an inch			Percentage
			Garro Hill Cotton
2	..	..	2.3
3	..	..	5.1
4	..	..	15.2
5	..	..	35.8
6	..	..	30.1
7	..	..	8.9
8	..	..	2.6

2. Fibre-length (inch)		
(a) By Balls Sorter	..	0.65
(b) By Bæer Sorter	..	0.66
3. Fibre-length irregularity (%)		14.9
4. Fibre-weight per inch (Millionth of an oz.)	..	0.391
5. Fibre-strength (oz.)	..	0.221
6. Intrinsic strength	..	0.57
7. Ribbon width (thousandth of an inch)	..	0.98
8. Swollen diameter (thousandth of an inch)	..	1.49
9. Maturity (%)	..	77-14-9
10. Standard hair-weight (Millionth of an oz.)	..	0.380
11. Convolutions per inch	..	69
12. Wax Content (%)	..	0.212

It will be noticed that the cotton is a short stapled type, having a staple length of only about 5/8" but the most remarkable features about it are its high fibre-weight per inch, ribbon width and swollen diameter. Hitherto, nearly 5,000 samples of cotton have been tested at the laboratory, and in all probability the values of these three properties of this cotton are highest on record here; while owing to its high fibre-weight per inch, the intrinsic strength (the fibre-strength per unit fibre-weight per inch) is probably the lowest on record. Another remarkable feature about this cotton is its extremely low wax content, which again is the lowest on record in this Laboratory. This low wax content gives it a peculiar harsh feel, which is very characteristic of the cotton. Furthermore, for its length, this cotton possesses rather high fibre-length irregularity percentage and rather low percentage of mature fibres.

The cotton was also subjected to a spinning test in the Laboratory, and it was found that, even with a moderately high twist, the 6's warp yarns spun from it did not possess the requisite strength. This is due partly to its low staple length and partly to its high fibre-weight per inch. The cotton, however, though not so suitable for spinning purposes, would be excellent, owing to its harsh feel, for mixing with wool; also, provided it could be given a

softening treatment, it would form a suitable material for the manufacture of hospital lint after removing the small amount of wax associated with it.

N. AHMAD.

Technological Laboratory,  
Matunga, Bombay,  
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### Biochemical Synthesis of Colouring Matter by an Indian Strain of *Penicillium* Mold

THE chemistry of colouring matters synthesised in higher plants has received considerable attention lately and the constitution of some have already been established. Colouring matters are also produced by some of the lower plants like molds and actinomycetes, the colour being usually located within the mycelium or cells and in a few cases it diffuses out into the culture medium. The colouring matters of the lower plants have not been studied systematically at all except in isolated cases by a few workers like Raistrick,<sup>1</sup> Friedheim,<sup>2</sup> Blochwitz,<sup>3</sup> and Griegarieva-Manoilova and Poradieva,<sup>4</sup> etc. Amongst the *Penicillium* group of molds, although the fact that they have the capacity of producing pigments is known, systematic attempts at elucidating the constitution of the pigments or the mode of their synthesis are extremely rare, the only work in this field being that of Friedheim who has experimented with *Penicillium phoenicum*.<sup>3</sup> This is probably due to lack of suitable micro-organisms which can produce pigments in experimentally workable amounts. Therefore the isolation from an indigenous source of a species of *Penicillium* which readily yielded scarlet coloured culture solutions has afforded an opportunity of studying the interesting problem of colour production. The present note is a preliminary report of the work so far done.

Whilst carrying out a survey of the microflora habitating on fruits of Northern India a mold was encountered on some of the samples of over-ripe William pears obtained from Kulu valley in the Punjab, which appeared to belong