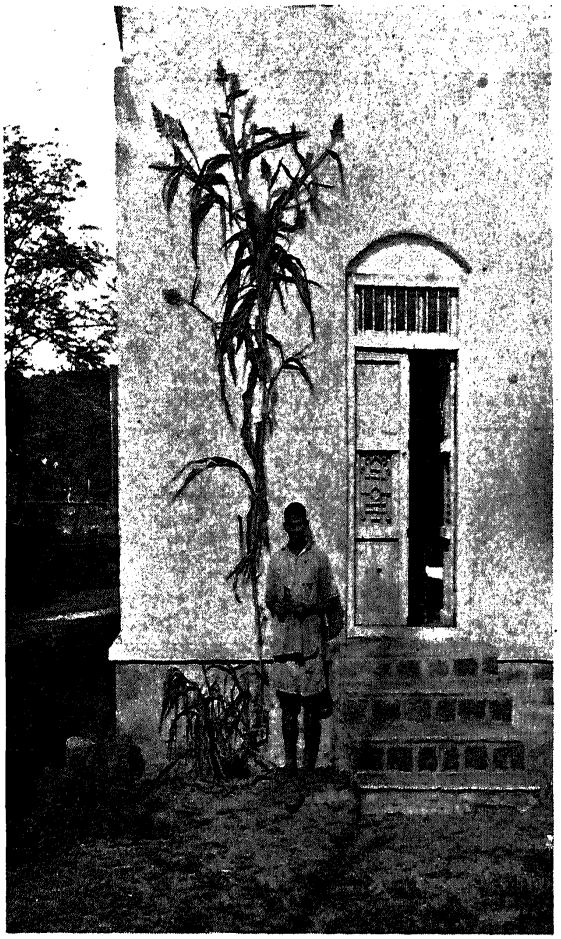
a height of 14·5 ft., with a large number of ear-heads. The plant bore in all seventeen heads from the seven upper nodes (12th to 18th). The main stem terminated in a large head. The emergence of the heads was from the apex towards the base. Secondary branches were also formed in the upper nodes. Adventitious roots were noted in 12th, 13th and 14th nodes. The plant was further interesting in that it produced ten tillers including



the one described above. This kind of growth is very rare in this species of Holcus.

Poona,
January 9, 1943. G. B. PATWARDHAN.

Ed. Note: It is since reported very regretfully that the seeds of the plant were destroyed partly by birds and partly by rats in store.

ON THE VARIATION IN THE RATE OF ELONGATION OF THE COLEOPTILE OF ZEA MAYS

C. V. KRISHNA IYENGAR[1] has recently reported that the rate of elongation of maize coleoptile shows a fluctuating course when measurements are carried out at ten-second intervals with a magnification of 3,000. He is inclined to believe that the autonomous activity of the growing organs showing a pulsating nature (Bose, 1927) and the rhythmic change of potential in the plant body at short intervals as explained by Bose (1923) might indicate the occurrence of variation in the turgidity of the plant body even at short intervals; and this variation in the turgidity might account for the fluctuations in the rate of elongation of the coleoptile.

While this explanation may be correct the writer is puzzled by the following few questions and hopes that the author will throw light on the same.

How rigorous was the control of external conditions in this experiment? The author states that "the temperature was uniformly about 74° F.". No mention, however, is made of the relative humidity of the air and the constancy of illumination. A brief indication of these would have carried conviction. It is needless to point out that a very rigorous control of external conditions is absolutely essential in a delicate work of this type. Is it possible that the accuracy of measurements of such minute growth-rates can be vitiated by the nutations of the coleoptile? This difficulty is met with particularly when measurements are made with an auxanometer or a kathetometer and is emphasised, for instance, by Du Buy[2] in his work on the growth of the coleoptile of *Avena sativa*.

Pusa,
February 1, 1943. R. D. ASANA.

1. *Curr. Sci.*, 1942, **11**, 443–444. 2. *Rec. Trav. bot. neerl.*, 1933, **30**, 858.

ASSAY OF INDIAN ERGOT

WITH the exception of ergot found on certain species of grasses near the Simla Hills,[1] medicinal ergot growing on rye has not been reported from India. Recently, Mr. K. M. Thomas of the Mycology Department, Agricultural Research Institute, Coimbatore, South India,[2] has successfully grown ergot on rye plots in the Nilgiri hills following the method originally advocated by Hynes,[3] and referred to in detail by Mukerji and Bose.[4] Through the courtesy of Dr. J. N. Ray, Director of Production (Drugs and Dressings), Office of the Director-General, Indian Medical Service, the Biochemical Standardisation Laboratory was afforded the opportunity of examining this specimen of ergot artificially grown for the first time in India. The medicinal importance of Ergot and shortage of the drug during wartime in India justify the publication of the analytical figures obtained.

1. *Botanical Examination*:

Length of sclerotia = 2 to 3 cm. Smallest size = 1 cm. Some sclerotia are cylindrical with a thick base and nearly pointed tip, others are markedly curved. Appearance—dark coloured hard structures, 4 to 5 mm. thick with a yellowish core.

The length of sclerotia imported from Europe varies from 1 to 3 cm. These are nearly cylindrical, slightly curved with longitudinal furrows and externally dark brown with a pinkish core.

Transverse section: The outer portion consists of small dark-coloured cells, the colour of which is changed to brownish red on the