Vol. vii. of the *Agricultural Journal of Egypt* gives a series of plant-development curves plotted from observed data. This method is claimed by Dr. Balls as having been devised by himself, but surely botany has not had to wait so long for growth to be graphically represented. Flowering and fruiting of a considerable number of members of the vegetable kingdom can be almost definitely stated if the time of the appearance of the plant above ground be known. The question of watering and the consequent increase of the crop are points brought out by the report, but this is quite an elementary matter also. The reference to it on p. 52 is simply an enunciation of the obvious, and quite harmless.

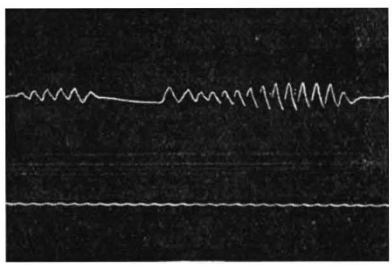
Dr. Balls's statement that "the satisfactory nature of the results may be seen at a glance by those who care to consult the paper in question" can only be interpreted as meaning that one row of fifty plants has produced data of considerable value and quite satisfactory as compared with the data obtained by himself from five rows of one hundred plants. From the important deductions arrived at by Dr. Balls in the analysis referred to in his letter, the data must be of an unusually complete nature, and the daily observations of this large number of plants throughout a season would be extremely useful for other minds to work upon. If these data are accessible, then the Egyptian Agricultural Department has wasted time, money, and energy in repeating on a much smaller scale research work that has already been so effectively done on a much larger scale by one of its own employees. Presumably the Department had the previous complete data before it, and yet we find it undertaking the research work *de novo*. Stranger still, no mention is made of the previous work so completely carried out on such a large scale by the Department—so complete, in fact, that it forms a far surer basis for deductions than the series of data now found in vol. vii. of the *Agricultural Journal of Egypt*.

Dr. Balls is quite correct in saying that "as regards the forecasting of the flowering itself by the growth-curve, the data under discussion have no significance." The writer of the article came to the same conclusion. It would appear that data on growth prior to May 28 are essential, and this feature is treated very inadequately in the report. It may be added, however, that observations are given commencing at various dates from April 27 to May 23. In the case of No. 17 Ashmoun, the growth records date from April 27, but these give no indications of any peculiarity between April 27 and early in June; the growth-curve is practically a straight line for a mean of forty-two plants (see p. 30 of *Journal*). If all the plants gave similar results, it may explain why further tests were not made. In any case, it is quite evident that height, *per se*, had little influence on the flowering either as to its beginning or as to the attainment of its maximum flowering period. If this earlier period of growth is such as to be so distinctive as to afford a forecast that would be of such enormous value to a great industry, why has the Department of Agriculture totally ignored it? Dr. Balls clearly indicates that the experiment on a very large scale has been made, and he has used the data for his own conclusions, so the Department must have had these important results in their possession.

As regards "the prediction of bolling from flowering" and the seven-week interval between them, the curves do not give anything approaching a satisfactory agreement when superimposed, not even when treated so unscientifically as suggested. It must be acknowledged that the whole series of data lacks the element of a real appreciation of the practical deductions that might have been made from them, and the draughtsmanship is bad, as well as the reproduction of the curves. This, however, does not prevent the redrawing of the curves from the data on a large scale. If this is done they yield nothing but generalities, of even less value than a schoolboy's observations on the growth of a pea or a daisy. If the Egyptian Agricultural Department would give us the much more complete and exhaustive data already obtained by its own experts in previous research work, the cotton industry of the country would be considerably benefited by having a basis on which to build up its own conclusions. THE WRITER OF THE ARTICLE.

The Duration of Resonance in the Internal Ear.

HELMHOLTZ'S estimate. 9·5 free vibrations to reduce the intensity of a sound to one-tenth of its original value, was drawn from the effect of shakes or trills in music. It would have been better, instead of a reiteration of notes, to take the simple case of a single note ending staccato, as exemplified daily in speech. The reproduction here of a typical mouth-tracing, made with the kymograph, of the word *utter* in a phrase intoned rapidly at pitch 100, and timed by a 100 fork, shows that 9·5 vibrations would completely obliterate the mute or silence between the two utterances of voice. It would be impossible to distinguish *utter* from *udder*.



When speaking of the theory of resonance in the cochlea, Thomas Young had said (*Nat. Phil.*, 1807, i., p. 386):—"It is uncertain whether any fibres in the ear are thus sympathetically agitated in the process of hearing, but if there are any such vibrating fibres, their motions must necessarily be of short duration, otherwise there would be a perpetual ringing in our ears, and we should never be able to judge accurately of the termination of a sound." He returns to the subject on the next page. These remarks of Thomas Young appear to have been overlooked.

W. PERRETT.

University College, London, May 6.

Recovery of Speech through Excitement.

RECENTLY a soldier who had "lost" his speech through shell-shock was brought to me. I told him he was shamming, and that there would be trouble of an acute kind if he did not recover quickly. He was able to speak very well in a few days. I imagine that 99 per cent. of those who have lost their speech and then suddenly recovered it belong to the same category.

The case of the son of Crœsus quoted by Capt. Newton Friend in NATURE of May 9 is mythical. We learn to speak, and a man could no more speak at the first attempt than he could play the violin.

G. ARCHDALL REID.

Netherby, Victoria Road, S.,
Southsea, May 13.