

The present total shortage of 286 for all groups is some 20 per cent. of the number at present employed.

The total staff requirements of each employing body in 1952 represent the following percentage increases over the staff at present engaged (vacancies ignored in each case): Government, 66 per cent.; teaching, 17 per cent.; Universities, 68 per cent.; research institutes, 94 per cent.; and industry, 74 per cent. The over-all increase for all groups is 53 per cent.

Details of the actual numbers now employed and likely to be required are shown in Appendix II.

WASTAGE IN SCIENTIFIC PERSONNEL

In order to determine the rate of engagement of scientists employers were asked to indicate the number of scientists engaged during 1947 (a) as replacements and (b) for new posts. Of the total of 265 scientists engaged, some 61 per cent, or 162, were for new posts and the balance of 103 were replacements. This replacement figure enables us to make an estimate of the likely annual wastage over the next few years arising from death, retirement, and transfer overseas or to other employment.

The wastage between 1948 and 1952 (515) has been taken to be five times the number of replacements engaged during 1947. Some allowance has to be made for a margin of error in this assumption. A proportion of persons engaged during 1947 would be replacements drawn from other positions within the existing pool of scientific workers, and of these some part would merely be replacing persons who had taken other positions but remained within the pool. Inclusion of these would tend to make the figure of 515 too high. Allowing for the annual turnover rate of male labour in clerical employment generally (some 16 per cent. to 18 per cent.)* and for the greater stability of professional workers, it is the considered view of the Committee that the error due to this cause could not be as great as 10 per cent. On the other hand, some retirements would not be replaced during the year, and exclusion of these would tend to make the figure of 515 too low. Again, after careful consideration, we are of the opinion that the error due to this cause would not amount to 10 per cent. The actual figure for wastage is therefore considered to lie between 464 and 566, the probability being that the two sources of error will largely cancel, leaving the figure very close to the assumed one of 515.

THE FUTURE DEMAND

To obtain the total additional number of scientists required over the next five years, therefore, it is necessary to add the figure for wastage (515) to the number estimated to be required by employers (766), giving a grand total of 1,281.

It is necessary, therefore, to consider next the possibility of this demand being met by the number of scientists trained in the University during that period.

V. IS THERE A SUPPLY FORTHCOMING SUFFICIENT TO MEET THE DEMAND ?

In considering this problem the following questions were made the subject of statistical analysis :—

1. Number of students enrolling in science classes year by year between 1927 and 1947.
2. Ratio of students taking science courses to students in other faculties.

* These figures were supplied by the Department of Labour and Employment from its *Half-yearly Survey of Employment*, published July, 1948.