

EXPANSION IN SCIENTIFIC EMPLOYMENT

An examination of these questionnaire returns showed in a striking manner the growing demand for the services of scientists during the past twenty years.

Excluding scientists employed in State post-primary schools, the scientific labour force expanded from 162 to 1,040, an increase of 540 per cent. between 1927 and 1947. The figures also show a further 700 scientists will be required between 1948 and 1952, representing a further growth in demand of 67 per cent. on the 1947 figures. If State post-primary schools are included the increase is 766, a reduction in the over-all increase from 67 per cent. to 53 per cent.

New Zealand's requirement of 2,207 scientists in 1952 would represent approximately 1.2 scientists to every 1,000 of population. The corresponding figure for Great Britain is 1.6 (see page 6 of this report). This would indicate that the figure of 2,207 for New Zealand cannot be regarded as extravagant provision.

The use of scientists over these years is further shown by examination of the major subjects of their degrees as reported by employers and shown in Appendix I. For various reasons complete analysis was not possible—for example, in post-primary schools a graduate with a science degree may be instructing over a wide range of subjects and does not necessarily confine his teaching to his honour's subject.

DEMAND IN PRINCIPAL BRANCHES OF SCIENCE

The subject of the greatest numerical importance is chemistry, with a rate of increase of over 600 per cent. between 1927 and the present date. A more striking, if numerically smaller, increase is shown in botany. Rates of increase are shown in the following figures, in which index numbers (base 1927 = 1) are used (excluding State post-primary schools):—

Major Subject.			1927.	1947.	1952.
Agriculture	..	..	1 (9)	12	21
Botany	..	..	1 (5)	14	28
Chemistry	..	..	1 (56)	7	10
Forestry	..	..	1 (5)	4	13
Geology	..	..	1 (11)	4	5
Physics	..	..	1 (27)	7	11
Zoology	..	..	1 (13)	6	8

(Actual numbers of scientists in the base year are shown in brackets.)

The subjects mathematics and home science were omitted from the above table, as the number of people with those qualifications employed other than in post-primary schools is relatively small.

Further analysis of the requirements of the various employing authorities is shown in the tables in Appendices IIIA to IIIE. From these tables it is apparent that the demand from industrial concerns is almost exclusively for chemists and chemical engineers. No other group has such a pronounced emphasis on any single subject, although in teaching the preference for mathematics, home science, and chemistry is very marked.

In Government Departments and local authorities physics and chemistry take precedence in numbers, but the highest anticipated rates of increase are in home science, forestry, botany, mathematics, and agriculture.