About three quarters of the payments made by the Federal Government on scientific activities are for the conduct of research and development. Although the Government continues to perform most of this research within its own establishments, its support of outside research is increasing; in 1961-62 intramural expenditures accounted for 80 p.c. of the total but by 1964-65 this percentage will have fallen to about 69. The proportion performed by Canadian industry, which was 11 p.c. in 1961-62, will have increased to 20 p.c. by 1964-65, and that performed in Canadian universities will have increased from 7 p.c. to 10 p.c. in the same comparison.

## 8.—Federal Government Expenditures on the Conduct of Research and Development, Years Ended Mar. 31, 1962-65

(Millions of dollars)

| Performing Organization   | 1961-621     | 1962-63      | 1963-641     | 1964-651     |
|---|--------------|--------------|--------------|--------------|
| Reporting department or agency  | 154.5        | 148.9        | 159.8        | 167.1        |
| Profit organizations<br>Educational institutions and individuals at such institutions | 20.8<br>14.0 | 20.2<br>16.9 | 36.8<br>19.0 | 48.1<br>24.4 |
| Others (incl. non-profit organizations, other governments and foreign recipients)     | 3.4          | 2.9          | 4.0          | 3.4          |
| Totals, Expenditures  | 192.7        | 188.9        | 219.6        | 243.0        |

<sup>1</sup> Estimated.

As shown in Table 9, the proportion of government funds allotted to the support of research and development in the physical sciences increased over the period 1962-63 to 1964-65 from about 70 p.c. to 74 p.c., and engineering continued to receive more than 55 p.c. of these funds. Within the life sciences, more than one half of the research and development expenditures continue to support the agricultural sciences. Table 9 also classifies research and development expenditures by area of investigation. It is noteworthy that expenditures in the field of space travel and communications increased from 0.9 p.c. of the total in 1962-63 to 3 p.c. in 1964-65. In the latter year, approximately 16 p.c. of the research and 35 p.c. to military research.

## 9.—Federal Government Expenditures on the Conduct of Research and Development, by Scientific Field and Area of Investigation, Years Ended Mar. 31, 1963 and 1965 (Millions of dollars)

| Scientific Field                   | 1962-63 | 1964-651 | Scientific Field and Area of<br>Investigation | 1962-63       | 1964-65 |
|------------------------------------|---------|----------|---|---------------|---------|
| Scientific Field                   | e<br>e  |          | Scientific Field—concl.                       |               |         |
| Physical Sciences                  | 132.7   | 179.1    | Life Sciences                                 | 56.2          | 63.9    |
|                                    |         | 105.3    | Agricultural sciences                         | 30.9          | 33.1    |
| Engineering                        | 11.5    | 20.6     | Biological sciences                           | 14.4          | 17.7    |
| Chemical                           | 2.5     | 3.1      | Biological sciences<br>Medical sciences       | 10.9          | 13.1    |
|                                    |         | 2.4      |   |               |         |
| Civil<br>Electrical and electronic | 19.2    | 28.2     |   |               |         |
| Mechanical                         | 9.6     | 17.8     | Totals, All Scientific Fields                 | 188.9         | 243.0   |
| Other                              | 28.6    | \$5.2    |   | 1011010101010 |         |
| Astronomy                          |         | 1.8      |   |               |         |
| Chemistry                          |         | 15.2     |   |               |         |
| Geology and other earth sciences   |         | 9.0      |   |               | 0       |
| Metallurgy                         |         | 3.6      | Area of Investigation                         |               |         |
| Meteorology                        | 1.5     | 2.0      |   |               |         |
| Oceanography                       |         | 3.9      | Nuclear science                               | 31.5          | 38.6    |
| Physics, nuclear                   | 7.0     | 10.0     | Space travel and communications               | 1.7           | 7.3     |
| Physics, non-nuclear               | 18.7    | 22.2     | Military science                              | 60.2          | 84.9    |
| Other                              | 4.0     | 6.1      | Other projects                                | 95.5          | 112.2   |

<sup>1</sup> Estimated.