of milk-production varies somewhat with the breed, the general rule being that the heavier the breed the later the time. Thus Jersey cows, because they are lighter, reach flush of milk-production after calving earlier than cows of the other principal dairy breeds. Furthermore, the lactational tests for Jerseys rise continually throughout the lactation period, this, as pointed out in the third article, not being the case for the other breeds (see Graph 4, page 78, *Journal*, February, 1925). For the other breeds the test decreases for a while and then rises steadily to the end. Lactational-test curves vary for different periods of the year of commencement, and so does flush of milk-production. As a rule flush of milk-production is fairly well maintained for cows of good dairy qualities until about the sixth month. If these points are considered in conjunction with Table 17 one now sees the reason for the apparent anomalous result for the Jerseys in Table 15.

To sum up, therefore, May, June, July, and August are the highest-testing months. Cows commencing so that they reach the flush of their milk-production during the above-mentioned period will have higher annual tests, and will produce more butterfat, than for any other period of commencement. This conclusion agrees with that of an investigation made by the United States Dairy Division (see U.S.A. Bulletin 1071), in which it was found that autumn-freshened cows produced most butterfat, next in order being winter calvers, and spring and summer calvers lowest with equal amounts. In all 10,870 records were studied.

*Table 18.—Friesian Monthly Tests for Different Periods of the Year, irrespective of Time of Commencement of Lactation Period: Standard* versus *Complete Data.*

| Periods. | All Friesians. | | Selected Friesians. | |
|---|---|---|---|---|
| | Average Test. | Percentage Total Range of Variation over Three Periods. | Average Test. | Percentage Total Range of Variation over Three Periods. |
| May, June, July, August .. | 3·85 | .. | 3·72 | .. |
| March, April, September .. | 3·64 | 10·5 | 3·65 | 5·2 |
| October, November, December, January, February | 3·47 | .. | 3·53 | .. |
| Average monthly test .. | 3·63 | .. | 3·63 | .. |

NOTE.—For individual monthly tests see Graph 12.

YEARLY VARIATIONS DUE TO LENGTH OF PERIOD OF GESTATION DURING TEST.

In order to ascertain the effect of the length of the period of gestation on the annual test a random selection of available data has been taken and tabulated according to the varying periods between commencement and effective service during test. The results of this analysis are given in Table 19. Where cows are empty for less than eighty-three days during test they will calve within 365 days following calving at commencement (the gestation period is taken as 282 days). Such records are represented by the first groups given in the table.