

REPRODUCTIVE PERFORMANCE OF IMPORTED DANISH AND AUSTRALIAN JERSEY  
IN CENTRAL INDIA

B. KUMAR \*  
B.K. DAVE  
INDIA

Briggs(1956) noted that Jersey breed is reputed as dairy breed and is comparatively tolerant to hot and humid climate than other breeds of Europe and is champion producer of butter fat with appreciable quantity of milk. The above characteristic of this breed probably have been the reason for its importation by developing countries in the tropical and subtropical countries of the world for use in crossbreeding programme. In India too for avoiding continued importation of bulls, Jersey bull mother farms have been established in the several parts of the country. Since this has been the first time that purebred exotic female stock was kept under wide range of tropical environment, it was essential to study the productive and reproductive traits to assess their suitability to <sup>the</sup> Indian climate.

The data for this investigation included records of 100 imported Australian in calf Jersey heifers and 150 imported Danish Jersey heifers of two farms (F-1-A) and (F-2-A), located in Central India i.e. Bhopal. The importation was done in 1977. Feeding and Management of these animals at both the farms were under the guidance of technical personnels and were on similar lines.

The age at first calving of the imported Jersey from two different sources were  $727.37 \pm 9.43$  and  $755.54 \pm 8.98$  days and was significantly different. . The age at first calving was in agreement with ~~with~~ the desirable age at first calvi-

\* Department of Animal Production, Livestock Farm, Adhartal, Jabalpur(M.P.) INDIA

ing in Jersey breed as 23-25 months in temperate climate (Yapp and Nivens, 1955).

The overall average of 1<sup>st</sup> and 3<sup>rd</sup> service periods in Australian and Danish Jersey were 115.59 and 154.18 days, respectively. The first service period was of the longest duration in both Jersey herds. Danish herd in particular based on 126 observations recorded longest first service period of 172.02 days and was significantly different than in Australian Jersey. The Australian Jersey had the lower service period in both the farms, after all the parturations as compared to Danish Jersey. There was positive and highly significant correlation between the service period and the calving period.

The overall average number of services required per ~~service~~ conception in a period of 4 years at F-1-A and F-2-D farms were 1.96 and 2.85 services, respectively. These imported Jersey animals required less number of services per conception than those reported by other Indian workers in similar imported herds elsewhere (Nair, 1975 and Rao & Rao, 1975). Among the herds, Australian Jersey cows required less number of services for conception than Danish except in first year as if they <sup>got</sup> adopted better than the Danish cows in this reproductive performance. The overall effect of the 4 years breeding was that the 52.90 percent Australian Jersey conceived as against 38.14 percent in Danish Jersey at first service and only 11.20 percent as against 29.38 percent Jersey at F-1-A farm required more than 3 services.

The overall calving interval of 405.58 days in both the Jersey herds were shorter than those reported by Heriman et al (1953) and El-Itriby et al (1963). The various

factor affecting this trait viz seasons, year, service sire and farms except season all were significant.

The other revealing part of the data was that in the year 1977, the survival rate ( % ) at both the farms were the same (88.09 and 88.64) but in the succeeding years, percentage <sup>survival</sup> of Australian Jersey calves was better than those in Danish Jersey calves. Out of the total percentage of losses the overall 1.65 percent born dead were less but the 16.08 percent calves died later were higher than those reported by Miller and Gilmore (1949).

The occurrence of abortion rates were 11.00, percent in 573 pregnancies in Jersey cows. According to sequence of calving, total calves aborted in percent were never similar in all the years, the range being 2.44 to 27.27 percent. The other reproductive disorders like premature births, still births were also higher in Danish Jerseys besides abortions.

The HRS formula devised by Johnson et al (1964) to aid in monitoring the current reproductive performance of these two herds was used. The mathematical formula included two factors, the percentage of herd made up of problem cows and the average days open for the problem cows. The highest HRS values of 63 and 56.70 were recorded in 1979, while Australian Jersey cows retained an average reproduction record of 65 percent the Danish Jersey adjusted on 125 observations reduced a HRS value of 23,50 percent equal to that of first year.

The Australian Jersey by this standard of reproductive measures except in first year was above average .

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