

curve for the next 20 days, after which there was a sharp decline not immediately checked by applying double the dose. Milk yield increased when the original treatment was resumed. The milk was normal in nitrogen partition and percentage of lactose, with fat and non-fatty solids above 6 and 10 percent, respectively. Two other virgin goats responded similarly and a virgin heifer gave a small amount of colostrum. These were the first tests with this estrogen that produced lactation in virgin goats in the absence of prolactin administration. Folley, Watson and Bottomley (15) used ointments containing 1.0, 2.5 and 5.0 percent of stilbestrol, rubbed on the udders of virgin goats, which caused their development and prolonged lactation without use of anterior pituitary extract. They (16) obtained as much as 80 milliliters of milk daily from 2 nulliparous Dairy Shorthorn heifers 18½ and 20 months old, following inunction of the udder 3 times weekly with 5 grams of 1 percent stilbestrol dipropionate ointment. The yield dropped to 20 milliliters but later reached a peak of 170 milliliters soon after treatment ceased. It declined subsequently as in a normal lactation. Casein and globulin contents were low but the fat content approached normal.

In the first practical treatment of cattle, Walker and Stanley (31) obtained as high as 14 and 16 pounds of milk daily from 2 heifers injected with stilbestrol dipropionate alone or in conjunction with testosterone propionate. One of the heifers yielded 2,880 pounds of milk subsequently in 8 months. A Jersey heifer was stimulated into lactation after 5 months' treatment with both materials, and in 50 days increased from 196 to 3,738 milliliters of milk containing 5 percent of butterfat.

Reece (28) injected 5 milligrams each of stilbestrol dipropionate and testosterone dipropionate twice weekly for 6 weeks into a 30-months-old Holstein heifer, then used the first estrogen only for 5 weeks additional. The udder developed; milking began when the injections were discontinued and eventually this animal yielded 4,517 pounds of milk from the second to eighth months of lactation. A calf nursed part of the milk during the first month of lactation. Stilbestrol dipropionate alone was injected for 13 weeks into a 33-months-old Jersey. Milking began after the injections ceased and from 0.4 to 1.2 pounds of milk were obtained daily for 12 days. A calf was allowed to nurse 9 days. A peak of 33.7 pounds of milk was obtained on the 95th day of lactation.