

EFFECT OF STILBESTROL ON UDDER DEVELOPMENT, PELVIC CHANGES, LACTATION AND REPRODUCTION

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INTRODUCTION

In 1938 a synthetic estrogen (?)¹ made and tested in England opened new avenues of investigation dealing with lactation and reproduction in mammals. This substance, diethylstilbestrol (subsequently called stilbestrol) has been tested with rats, guinea pigs, goats, cattle and fowls, and is being used therapeutically with human beings. In virgin animals it causes proliferation of mammary tissues, false heat, ovarian quiescence, relaxation of the broad ligaments and distortion of the rump and tailhead in cattle. There is need for more complete observation of the effects of stilbestrol upon milk production and reproduction. Heifers and dry cows were assigned to investigate the commercial application of stilbestrol treatment.

LITERATURE REVIEW

UDDER DEVELOPMENT AND LACTATION

Although many observations have been reported concerning use of stilbestrol with laboratory animals, fewer reports have dealt with milk goats and dairy cattle. Lewis and Turner (22, 23) injected stilbestrol subcutaneously, rubbed an alcohol solution on the udder skin and implanted pellets subcutaneously in kids and yearling goats, noting that it caused development of mammary tissue and started milk secretion in virgins but appeared to depress lactation with 2 goats in milk. Lewis (21) believed in 1942 that continued treatment with stilbestrol prolonged lactation in both virgin and older goats.

Daily doses of 0.25 milligram of stilbestrol stimulated lactation in Toggenburg goats (24), while doses of 1 to 4 milligrams depressed milk production.

Folley, Watson and Bottomley (13) brought a virgin female goat into lactation by rubbing 1 gram of 1 percent stilbestrol dipropionate on the udder thrice weekly for 30 days. Milk yield increased to 1.5 liters daily and then decreased slowly. Omitting stilbestrol treatment had no effect on the course of the lactation

¹ Italic figures in parentheses refer to Literature Cited in the back of this bulletin.