

EFFECT OF MULTIPLE SUCKLING ON LIVEWEIGHT, MILK PRODUCTION  
AND FERTILITY OF DAIRY COWS

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Multiple suckling gives good calf performance and Everitt and Phillips (1971) found that it increased the cow's subsequent yield during the same lactation. However, expression of oestrus and fertility may be depressed during multiple suckling.

A three year full lactation (A) and two early lactation (B) multiple suckling experiments were conducted at Kairi Research Station, North Queensland. For the full lactation studies 12 cows, of which 6 were supplemented with maize for c.100 days post partum, were free access suckled at 4 calves cow<sup>-1</sup> for 300 days and 20 were machine milked. Short term studies evaluated suckling method with calves weaned at eight weeks:- (i) Eight cows restricted access suckled (15 min twice daily) and eight cows free access suckled at four calves/cow; eight cows milked. (ii) Sixteen cows restricted access suckled with either four or five calves/cow, 16 milked. Assessment of oestrus included per rectum examination. In (B) experiments nurse cow milk production was estimated weekly by weighing calves before and after feeding at two consecutive milkings.

In A studies milked cows gained 37.7 kg while suckled cows lost 18.2 kg ( $P<0.05$ ) and ended lactation in backward store condition. Conception rates were 90, 47 and 59% for milked, nil maize and supplemented suckled cows. Intervals to first oestrus were 52, 94 and 84 days respectively. Fertility of suckled cows declined in successive years with conception rates of 90, 55 and 17%. Four suckled cows had non regressed corpora lutea (CL), one developed a follicular cyst and ten were in anoestrus. CL cows responded to treatment with Nymfalon<sup>+</sup> and the nymphomaniac subsided into anoestrus after treatment. In year 2, three anoestrus cows in mid lactation received 9.1 kg maize/day for 21 days without response. Two cycled normally after subsequent injection with 45  $\mu$ g diethyl stilboestrol. In B studies liveweight change over lactation was +5.0 and +7.6 kg for milked and suckled cows. Milk yields during suckling were (i) 17.3, 19.3 and 20.6 kg/day for milked, restricted access and free access suckled cows ( $P<0.05$ ) and (ii) 16.0, 17.7 and 18.3 kg/day for milked, four and five calves/cow ( $P<0.05$ ). Suckling did not increase subsequent milk yields. Total yields were (i) 2769, 2734 and 2642 kg, and (ii) 2287, 2510 and 2271 kg. Fertility was not affected by suckling in early lactation. Interval to first insemination was 73.4 and 74.7 days and conception rate 90.6 and 87.1% for milked and suckled.

With multiple suckling oestrus activity is suppressed and anoestrus may result; Conversely, uterine tone was good even in non-cycling cows in early lactation. Improved nutrition may slightly improve fertility, but the problem apparently is physiological, probably via disturbance of hormone levels. Multiple suckling in early lactation is recommended. Long term continuous suckling should be restricted to cull cows.

EVERITT, G.C. and PHILLIPS, D.S.M. (1971). Proc. N.Z. Soc. Anim. Prod.  
31:22.

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+Nymfalon -Chorionic gonadotrophin and progesterone supplied by Intervet.