

type. On the "controlled-grazing" farm the herd has been composed of well-reared two-year-olds; on the "uncontrolled" farm, of poorly reared two-year-olds. The results obtained indicate the differences that might be expected:—

*Live-weights*

(From March, 1945, to twenty-four weeks after calving)

Treatment.	March.	Pre-calving.	Post-calving.	Four Weeks.	Eight Weeks.	Twelve Weeks.	Sixteen Weeks.	Twenty Weeks.	Twenty-four Weeks.
"Controlled" (19 head)	lb. 770	lb. 870	lb. 771	lb. 765	lb. 764	lb. 787	lb. 813	lb. 831	lb. 838
"Uncontrolled" (18 head)	634	704	615	610	624	658	691	710	721
Difference ..	136	166	156	155	140	129	122	121	117

*Production Averages*

(Up to 17th March)

Treatment.				Milk.	Test.	Fat.	Days.	Number of Cows.
				lb.	Per Cent.	lb.		
"Controlled" ..	..	..	..	4.281	5.4	233	216	19
"Uncontrolled" ..	..	..	..	3.726	5.3	199	216	18
Difference ..	..	..	..	555	0.1	34	..	..

The production difference in favour of the controlled group is likely to be greater by the time the season is complete, due to a tendency for the heifers of the uncontrolled group to dry off earlier.

The experiments in progress with cows under carefully controlled nutritive conditions on pasture involving large differences in the level of feeding provided an opportunity for building up both base-line information on the blood status (acetone bodies, sugar, calcium, magnesium, and phosphorus) of New Zealand dairy cattle and information on the possible effects of differential nutrition on such characteristics. These characteristics are of possible significance in relation to diseases associated with parturition and lactation (ketosis, grass staggers, and milk-fever).

Blood samples were taken weekly for a month before and a month after calving; thereafter they were taken monthly. Urine samples were taken monthly for acetone estimations.

Results have not yet been fully examined.

*Nutrition of Cows: Winter Feeding.*—An experiment has been commenced to determine the effect of different levels of feeding during the winter on the subsequent lactation.

*Measurement of Digestibility of Cow Pastures.*—The great practical difficulty of obtaining information of any value as to digestibility, nutritive value, and intake of dairy-cow pastures which arises from the fact that a digestibility trial involves a fourteen-day feeding period, during which time any pasture is changing in character, while in practice the dairy herds graze a field in one to two days, has made it necessary to investigate possible modifications of existing methods. The great quantity of feed required to be cut and hand-fed to cattle in digestibility work is also a major difficulty for many reasons. Accordingly, work during the past year has been concentrated upon the possibility of using the sheep instead of the cow as the measuring animal, and dried