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BRIEF COMMUNICATION

The use of 'Lipiodol' for sub-clinical iodine deficiency in livestock

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Details are presented of production responses to 'Lipiodol',* a preparation containing 40% w.w. iodine bound to poppy-seed oil, at present used as a slow release depot for iodine in the treatment of clinical iodine deficiency in livestock (Sinclair and Andrews, 1961). A number of field trials conducted by May & Baker New Zealand Ltd suggest 'Lipiodol' may be useful in correcting marginal iodine deficiencies in livestock. In sheep, a single treatment may be effective for at least 5 years.

Lamb Production and Survival

A random half of 5 ewe flocks was treated with a single injection of 'Lipiodol' at least 6 weeks before mating or during pregnancy. Results are shown in Table 1.

Growth Rate of Two-tooths (Gisborne)

Live-weight gains are presented for 2 trials with 'Lipiodol' treated two-tooth ewes over a 15-week period from January to April (Table 2).

TABLE 1 Lamb production and survival following treatment of ewes with 'Lipiodol'.

Locality	Time of treatment	No. ewes injected	Difference in % lambs born docked/weaned
South Auckland	pre mating	278	not recorded
Wairarapa	pre mating	100	18
South Canterbury	pre mating	159	10
Manawatu	mid pregnancy	115	5
South Canterbury	year 1	213	0
	year 2	149	17
	year 3	69	20
			†
			21
			23

† Mishap upset trial.

TABLE 2 Two-tooth live-weight gain (kg).

	'Lipiodol'	Control	Difference
Trial 1	No.	144	146
	Initial weight	46.5	46.9
	Gain	8.1	6.5
Trial 2	No.	50	50
	Initial weight	50.2	51.2
	Gain	11.3	7.1
			4.2

Dairy Cow Production

In a series of trials in factory supply herds, cows were paired on the basis of previous lactation and treated once with 'Lipiodol' approximately 1 month before calving. Milkfat production for subsequent lactations is shown in Table 3.

Reproduction in Dairy Cows

Injection of 4 ml 'Lipiodol' in 21 non-cycling underweight Friesian first-calvers in November reduced the average time to first oestrus after treatment from 4.4 to 2.4 weeks (Taranaki), compared to 20 control animals. In 2 out of 4 trials treatment with 'Lipiodol' reduced the number of services needed to get dairy cows in calf (Galatea and Te Puke positive).

* May & Baker Ltd.

TABLE 3 Milkfat production (kg/head) in cows treated with 'Lipiodol'.

Locality		No.	'Lipiodol'	No.	Control	Difference
Galatea	year 1	37	199.9	41	191.5	+ 8.4
	year 2	33	200.5	34	192.6	+ 7.9
Putaruru	year 1	128	148.7	123	144.0	+ 4.7
	year 2	98	170.5	97	172.6	- 2.1
Te Puke	year 1	70	171.6	72	165.9	+ 5.7
	year 2	66	192.2	67	186.1	+ 6.1
	year 3 (pt)	45	114.5	48	115.3	- 0.8
Raglan	year 1	20	135.9	20	128.4	+ 7.5
Morrinsville	year 1 (pt)	64	83.7	65	80.5	+ 3.2

Deer Fawn Survival (Helensville)

When fellow deer hinds (approximately 35 kg live weight) were injected with 1 ml 'Lipiodol' in late pregnancy (September) weaning percentage increased from 65 to 85.

Work is continuing to determine the extent of such responses as indicators of sub-clinical iodine deficiency in New Zealand.

REFERENCE

Sinclair D. P.; Andrews E. D. 1961. Deaths due to goitre in new-born lambs prevented by iodised poppy-seed oil. *New Zealand veterinary journal* 9: 96-100.