

heifers required a third breeding and were killed three days following the last service. Of the latter heifers, one had a fertilized ovum as well as a regressed embryo, while the other failed to ovulate (Table 6). All two-year-old heifers in group II became pregnant at first service as determined by rectal palpation and cessation of estrus, although one heifer had a regressing embryo and recent corpus luteum at time of slaughter (Figure 2). One animal of two bred in group III settled at first service and had a normal embryo. The other heifer in group III required a third breeding, and when she was killed three days following the last service, an ovum with a ruptured zona pellucida was recovered. The remaining three heifers in this group had ovulated without showing estrus as determined by rectal palpation and examination of the ovaries at slaughter. Three of the two-year-old heifers in group IV became pregnant at first serv-

TABLE 6.—EFFECT OF PROTEIN INTAKE ON EMBRYOS AND OVARIES OF BEEF HEIFERS AT SLAUGHTER.
(5 animals per group)

Item	Group Number							
	I	II	III	IV	I	II	III	IV
	Yearling heifers				Two-year-old heifers			
No. heifers bred	5	5	2	0	5	5	2	5
No. normal embryos at 44 days	5	5	0	0	3	4	1	3
No. regressed embryos before or at 44 days	0	0	0	0	1**	1†	0	1††
Average embryo								
Weight, gm	2.2	2.1	—	—	2.6	2.2	1.7	2.4
Length, mm	28.2	27.6	—	—	28.1	27.4	24.0	26.0
Combined								
Ovary weight, gm	9.1	8.6	5.0	4.2	9.8	10.8	10.2	9.5
Follicular index*	32.3	26.6	37.5	32.8	28.2	27.8	36.0	32.0
No. heifers 3 days postbreeding with:								
Fertilized ovum	—	—	—	—	1	—	—	1
Unfertilized ovum	—	—	1‡	—	1‡	—	1§	1

* Follicular index = (number of follicles 4 mm and larger) x (size in mm).

** Returned in heat after 18 days with regressed embryo in uterine body and a fertilized egg.

† Recent quiet ovulation with regressed embryo.

†† Bred at 3rd estrous period, had regressed embryo and unfertilized ovum.

‡ No ovulation.

§ Ruptured zona pellucida.