

A satisfactory basis of comparison with which to assess the standard of performance of the A.I. daughters is extremely difficult to obtain. That used is one of the best available and consists of comparing the production of the A.I. heifers in each herd, corrected to a maturity basis with the production of the mature cows in the herd. It is a method which bears heavily against the A.I. daughters, as the mature-cow figures are derived from a highly selected sample. On this basis the A.I. two-year-olds represent a gain of 30 lb. of butterfat per cow in producing ability. This figure is almost the same as that shown by the first crop in the 1946-47 season, where the difference between the production of A.I. two-year-olds and mature cows in the same herds averaged 33 lb. of butterfat in favour of the A.I. cattle.

The three-year-old performances were disappointing, showing an advantage over mature cows of only 5 lb. of fat in producing ability. This drop relative to their two-year-old performance is probably associated with the poorer dairy season of 1947-48. The cattle concerned actually produced less than they had done as two-year-olds. The second year's crop of two-year-olds averaged 47 lb. less than the first crop in 1946-47.

The performances of the different bulls in relation to their survey results are summarized below :—

## MERIT SIREs

	Official Survey.			A. I. Daughters.		
	Number of Lacts.		Fat.	Number of Lacts.		Fat.
			lb.			lb.
Greenerofts Hopes Prince—						
Dams .. ..	41	..	346	12	16	348
Final daughters .. ..	41	..	374	12	16	389
All daughters .. ..	52	..	373	40	73	349
Kuku Butter-King—						
Dams .. ..	13	..	367	19	30	340
Final daughters .. ..	13	..	373	19	30	341
All daughters .. ..	..	..	..	49	81	342
Awatea Phill—						
Dams .. ..	14	..	388	9	12	324
Private final daughters .. ..	14	..	387	9	12	351
All daughters .. ..	16	..	384	27	50	330
Erinview Teddy—						
Dams .. ..	10	18	367	14	14	309
Final daughters .. ..	10	18	455	14	14	337
All daughters .. ..	18	38	451	25	25	347
Lockhart Golden Laddie—						
Dams .. ..	20	30	340	8	8	307
Final daughters .. ..	20	30	389	8	8	318
All daughters .. ..	49	88	377	27	27	325
Greencroft Anticipation—						
Dams .. ..	14	19	349	4	4	432
Final daughters .. ..	14	19	368	4	4	382
All daughters .. ..	26	59	358	12	12	342
McLucky—						
Dams .. ..	17	..	378	6	6	301
Intermediate daughters .. ..	17	..	388	6	6	327
All daughters .. ..	..	..	..	16	16	323

In every case the A.I. cattle yielded less than might be expected from the bulls' surveys. This might be explained on a basis of a generally poorer standard of efficiency of feeding and management in the commercial herds in which the A.I. daughters were placed, together with a poorer standard of dams. Investigations are proceeding to test the validity of these suggestions, but it seems abundantly clear that the use of a merit bull of a 400 lb. daughter standard will not automatically result in cattle of a 400 lb standard unless feeding and management are at a very high level.