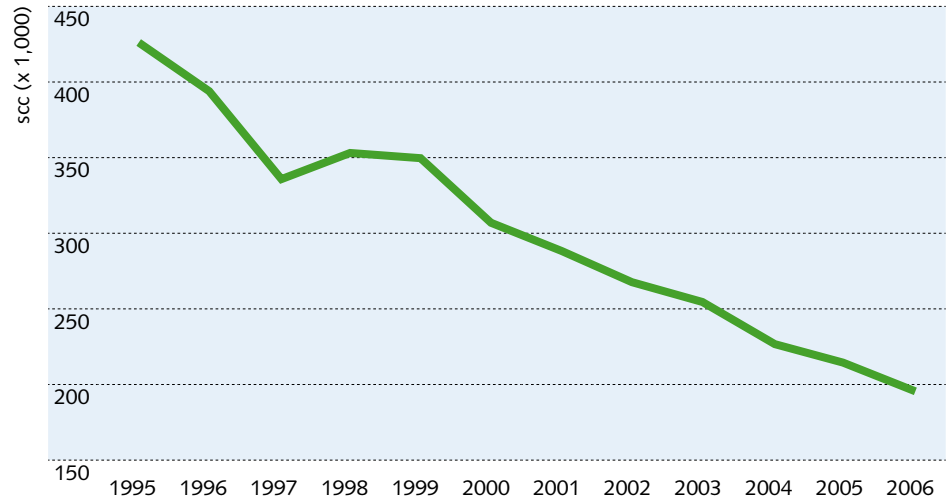




Fig. 2.4

Average somatic cell count, by year



A firm and constant policy was established by the Israeli Dairy Board in the 90s with the aim of improving milk quality. Economic incentives were set in order to lower the somatic cell count in the milk supplied to the industry and a threshold of price categories

was progressively lowered along years. The farmers' response caused the average SCC (annual average for all farms) to decrease from 428,000/ml in 1995 to 196,000/ml in 2006 (data from milk processing plants).



➤
Table 1
Ranges of winter production averages (Kg/d) and of summer to winter production ratios for the different groups in the year prior to the survey

Level of production	High		Low	
	Intensively cooled	Moderately cooled	Intensively cooled	Moderately cooled
Winter production average (Kg/d)	41 – 43	38 – 40	35 – 38	33 – 36
Summer to winter ratio (%)	96 – 100	86 – 88	97 – 103	84 – 90

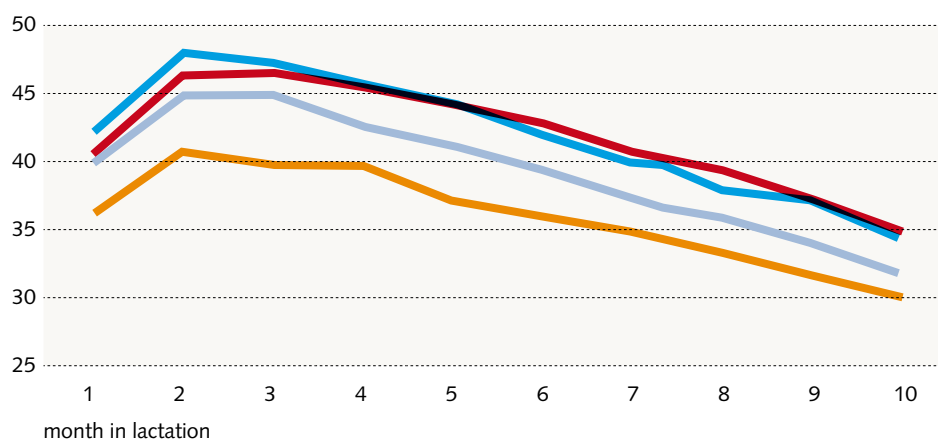
➤
Table 2
Average milk production (Kg/cow/d) for the different seasons and groups

Level of production	High		Low	
	Intensively cooled	Moderately cooled	Intensively cooled	Moderately cooled
Season				
Winter	42.0	39.1	37.1	35.3
Spring	42.3	39.2	39.1	36.2
Summer	42.0	35.7	38.0	32.0
Autumn	42.1	36.9	38.1	34.1

Lactation curves in the first 10 months in lactation for the different groups of high and low producing herds are presented in Graphs 1 and 2, respectively.

➤
Graph 1
Summer and winter milk production curves (kg/d), for intensively cooled (IC) and moderately cooled (MC) cows in High and Low producing herds.

— Winter IC High
— Winter MC High
— Summer IC High
— Summer MC High



➤
Graph 2
Summer and winter ECM production curves (kg/d), for intensively cooled (IC) and moderately cooled (MC) cows in High and Low producing herds.

— Winter IC High
— Winter MC High
— Summer IC High
— Summer MC High

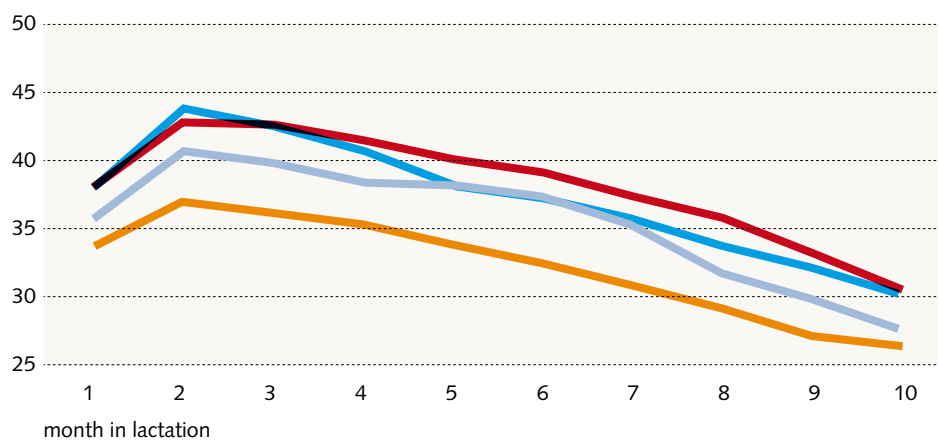


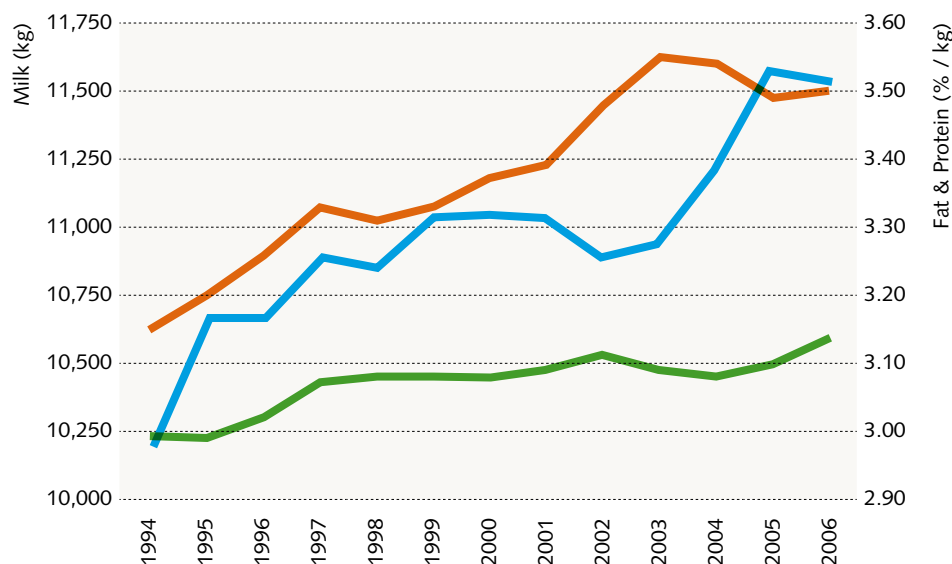


Table 3.1 & Fig. 3.1

Production averages of Israeli-Holstein cows, by calving year

305-day adjusted lactations (1-5)

Calving year	No. of cows	Milk, kg	Fat, %	Protein, %
1994	80,525	10,195	3.15	2.99
1995	83,696	10,665	3.20	2.99
1996	81,477	10,665	3.26	3.02
1997	81,507	10,887	3.33	3.07
1998	82,004	10,850	3.31	3.08
1999	81,742	11,029	3.33	3.08
2000	81,622	11,048	3.37	3.08
2001	80,787	11,031	3.39	3.09
2002	86,554	10,890	3.48	3.11
2003	84,696	10,938	3.55	3.09
2004	84,694	11,200	3.54	3.08
2005	83,456	11,565	3.49	3.10
2006	77,334	11,506	3.52	3.14



In 1991, the milk payment formula was changed in order to promote an increase in milk fat and protein content. Since then, steady progress has been achieved: fat and protein concentration rose 0.62 % and

0.20 %, respectively. Until the year 2000 there was a constant increment of average annual milk yield per cow, then a slight decline and in the last two years a renewed increase.

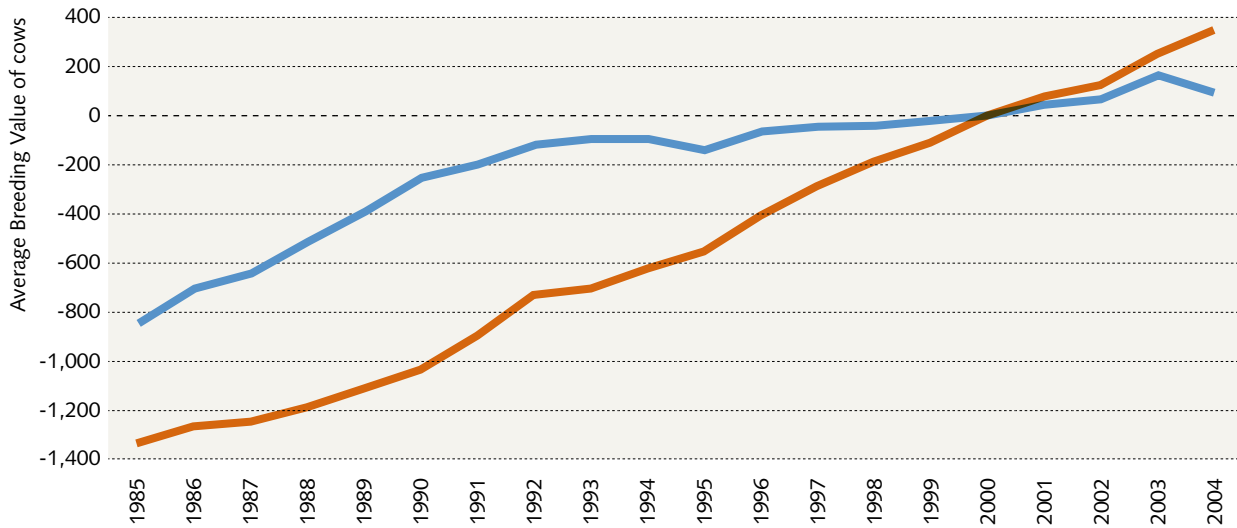


Fig. 3.2

Average Breeding Value of cows for PD04 and Milk, by birth year – Genetic Trends

— Milk
— PD04

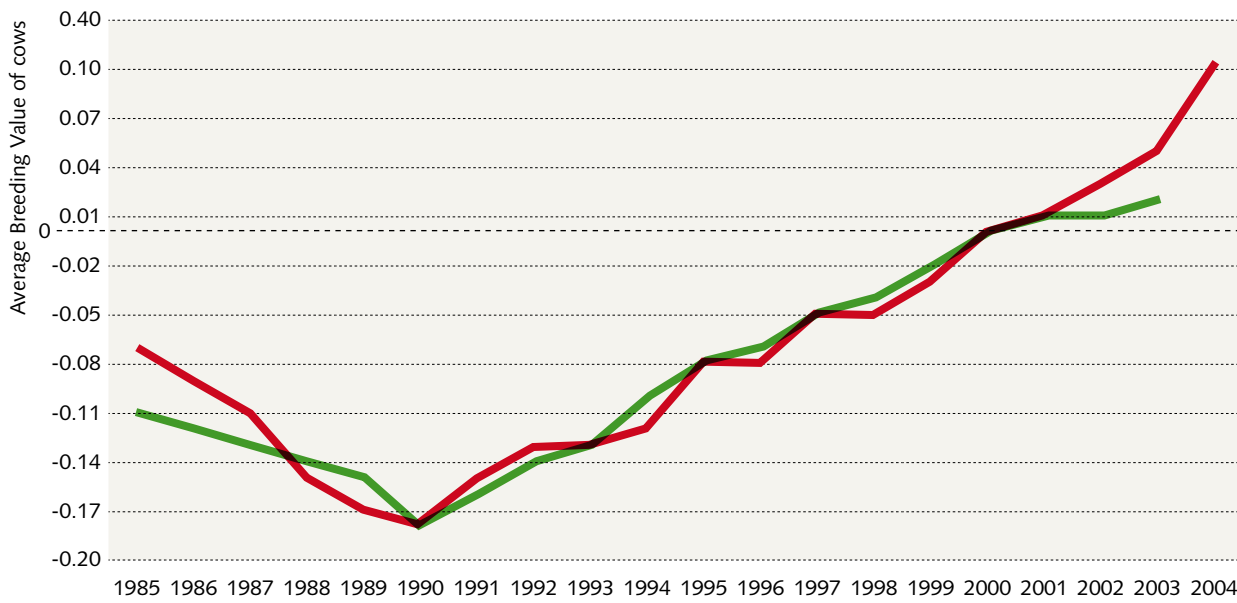


Fig. 3.3

Average Breeding Value of cows for Fat and Protein percentages, by birth year – Genetic Trends

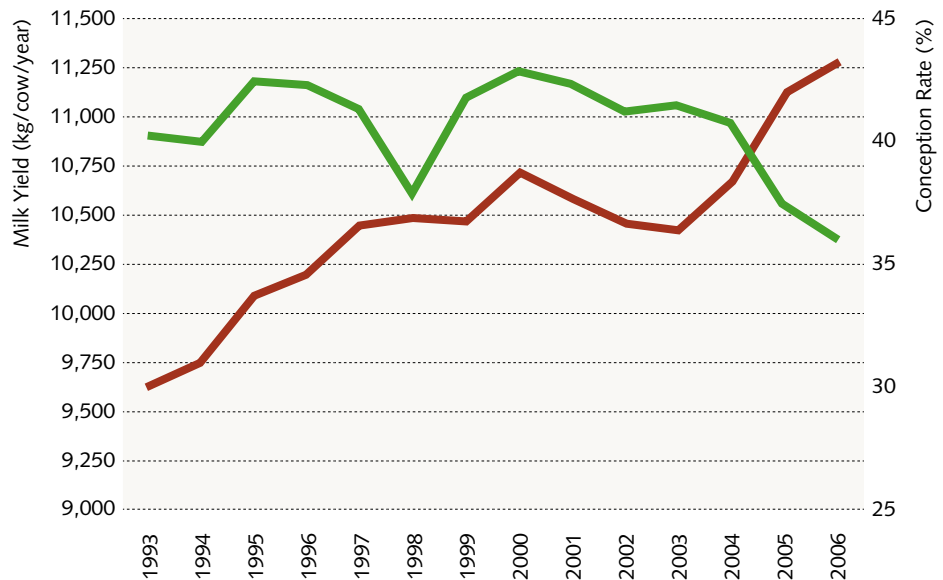
— Fat %
— Protein %



Fig. 3.5

Average Milk Yield and Conception Rate at 1st service, for adult cows, between 1993 – 2006

- Conception Rate at 1st service
- Milk Yield



The main fertility management goal for the farmer, is to have cows and heifers conceiving at the time the farmers intends them to, so that calvings will occur according to a projected production schedule.

Many studies in recent years have warned against the association between increasing levels of milk production and low fertility performance.

Fig. 3.5 shows that between 1991 and 2006 the Israeli cow has raised its average milk production by 1,913 kgs, without

noticeable deterioration of fertility performance, as evaluated by Pregnancy Rate at 1st service. This value has remained quite constant (38.2%) during those years. The lowest value (35.9%, in 1998) was the result of a very hot summer season, which significantly affected Pregnancy Rate. In 2005 there was a decline in fertility but in 2006 the tendency was upwards once again.