

Growth evaluation of the young Fleckvieh bulls

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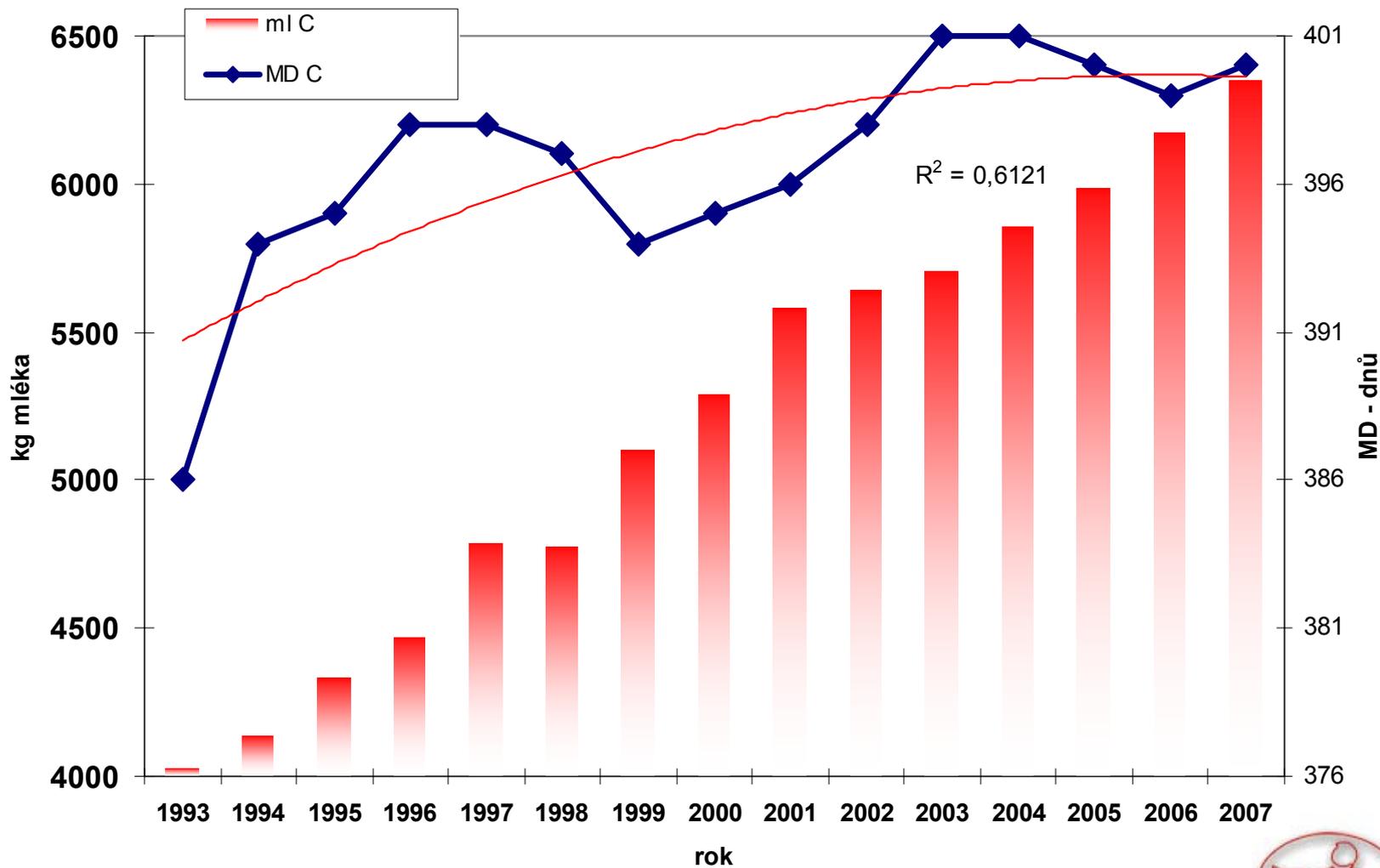


Topics

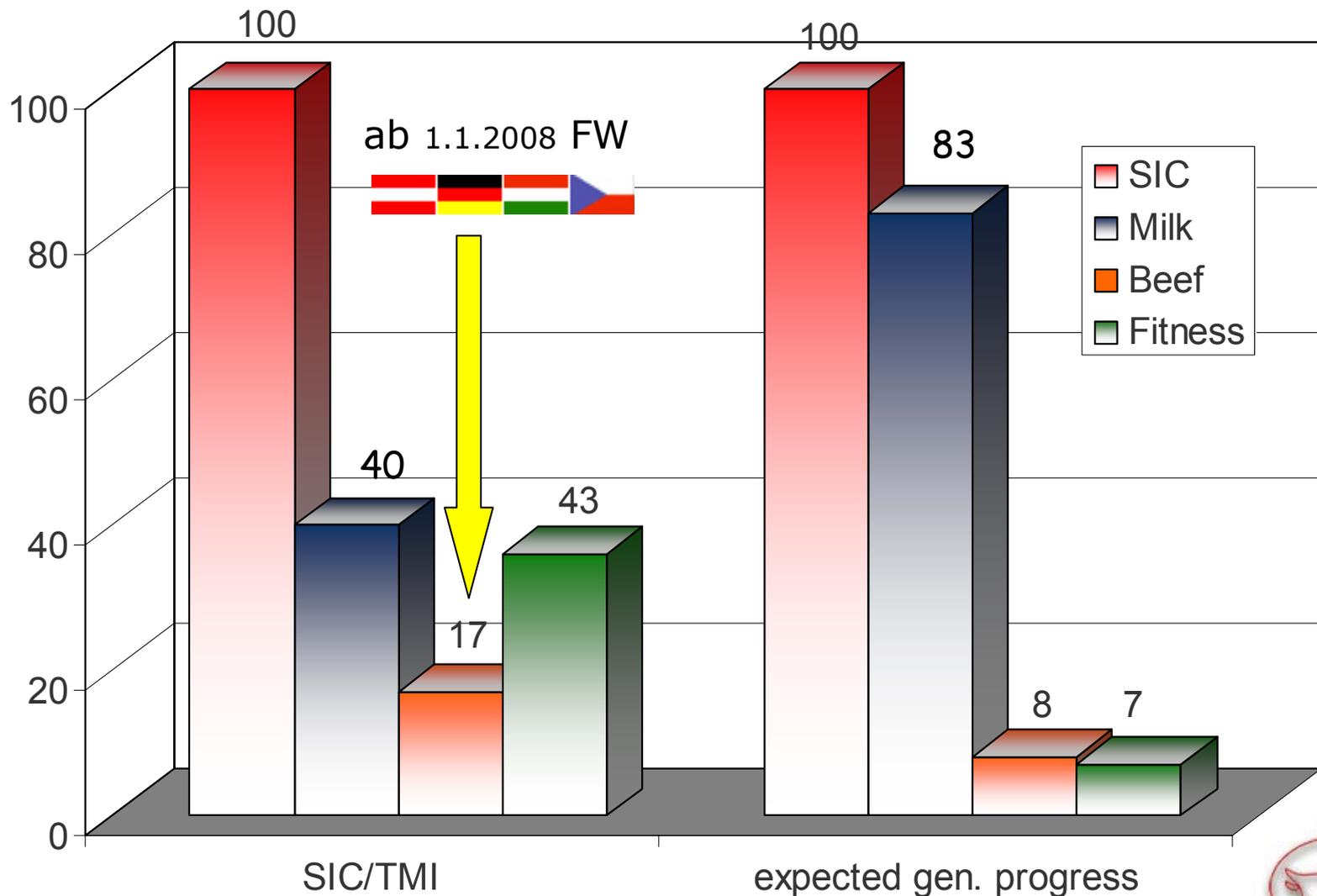
- **Dual purpose in figures**
- **Own performance testing of AI bulls**
- **Genetic evaluation of growth with RR**
- **Take home message**



Milk production development CZ FV



TMI in the Czech Republic



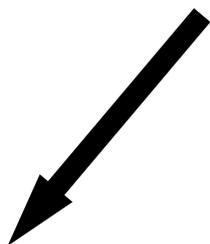
Data sources for growth evaluation

- Own performance – performance test station for young bulls – candidates for AI
- Progeny
 - Progeny test station
 - Progeny - field



Performance test of own growth

(age 2 – 15 months, selection ~ 13 months)



weighings 30-days intervals

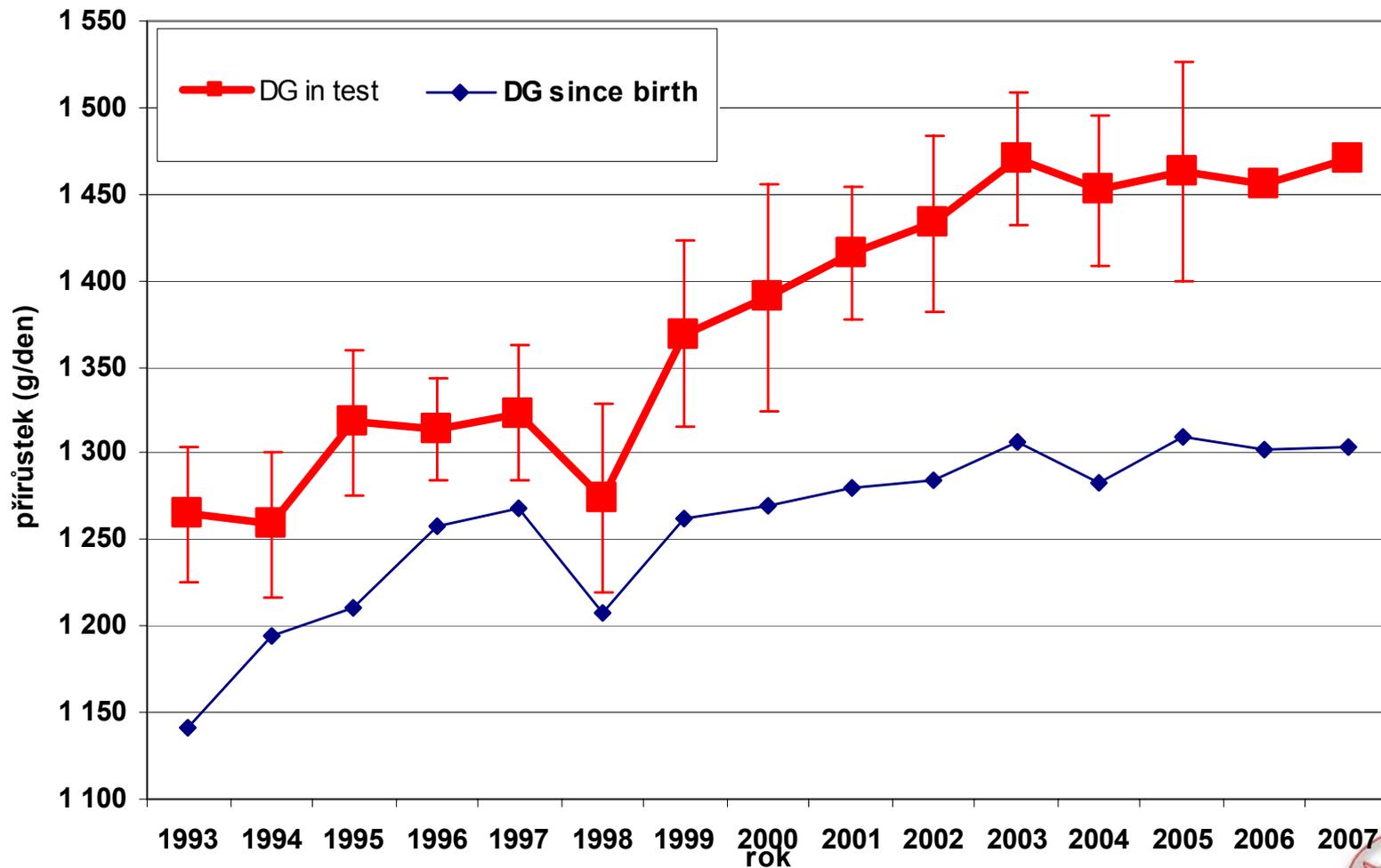
live weight  **repeated observations**

- Standardised conditions – regulated nutrition
- Bulls filled into stations continually all the year round
- Contemporary groups consist of animals at different phases of growth



Own performance of young bulls

(daily gain 1993-2005)



Factors influencing growth

- **External environmental**

- systematic (breeders condition)
- random

- **Internal factors**

state of animal in a moment of weighing

- genetic potential
- internal environment
 - systematic
 - random

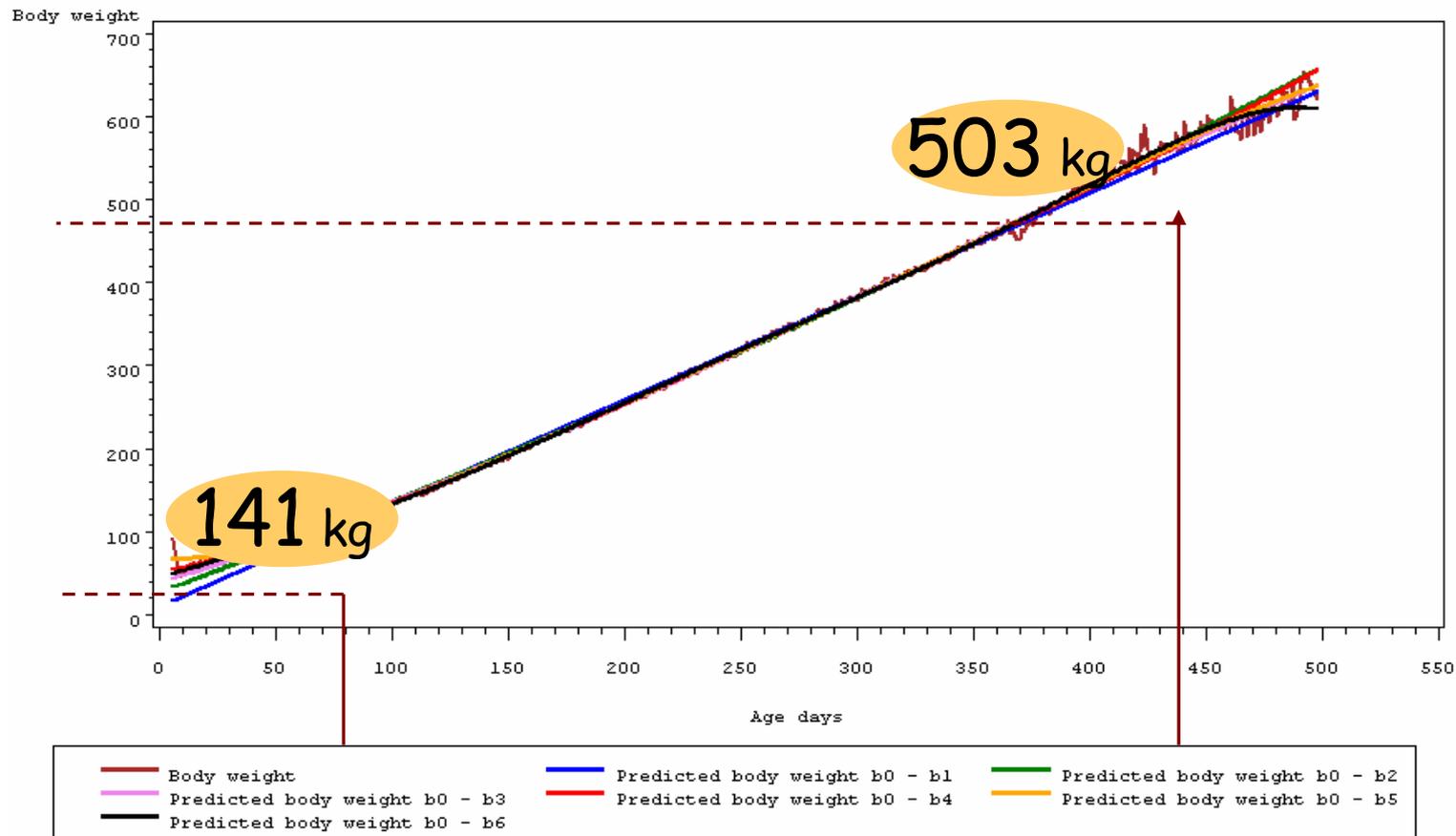


Data set

- 8,158 young bulls of Czech Fleckvieh (1971-2007)
- 16,154 animals in pedigree file

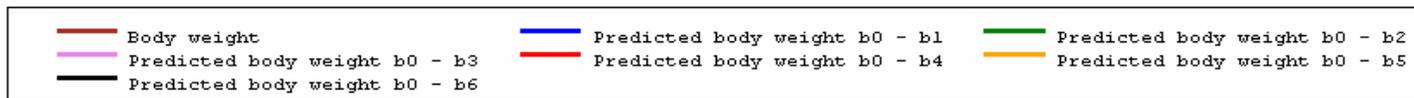
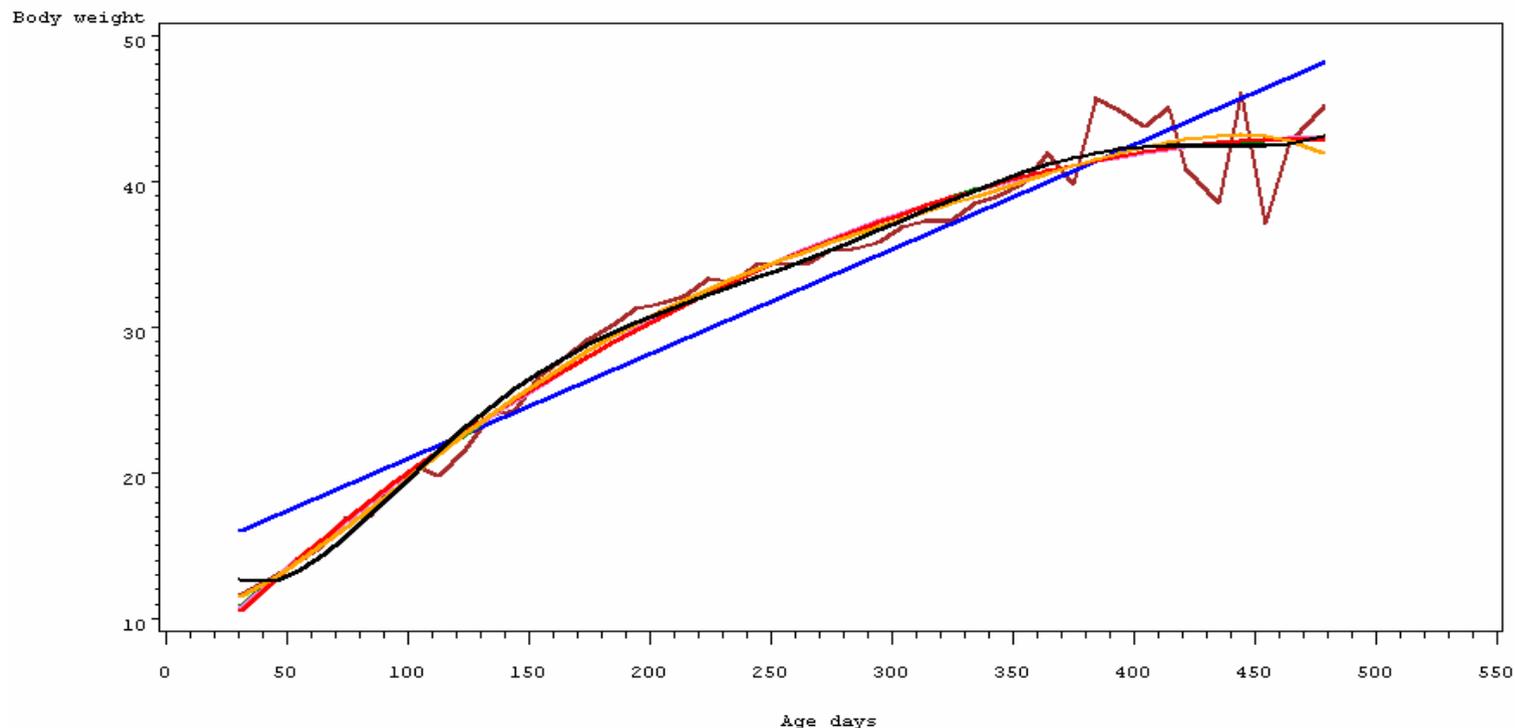


Body weight (kg)



Standard deviations of body weight (kg)

in 10-days intervals



The live weight ...

is the cumulative trait, influenced by accumulated

- **Genetic potential**
- **Environment**

During the whole history of the animal



The history of systematic environmental effects

- could be different for each animal
- difficult to account for it retroactively in the moment of evaluation



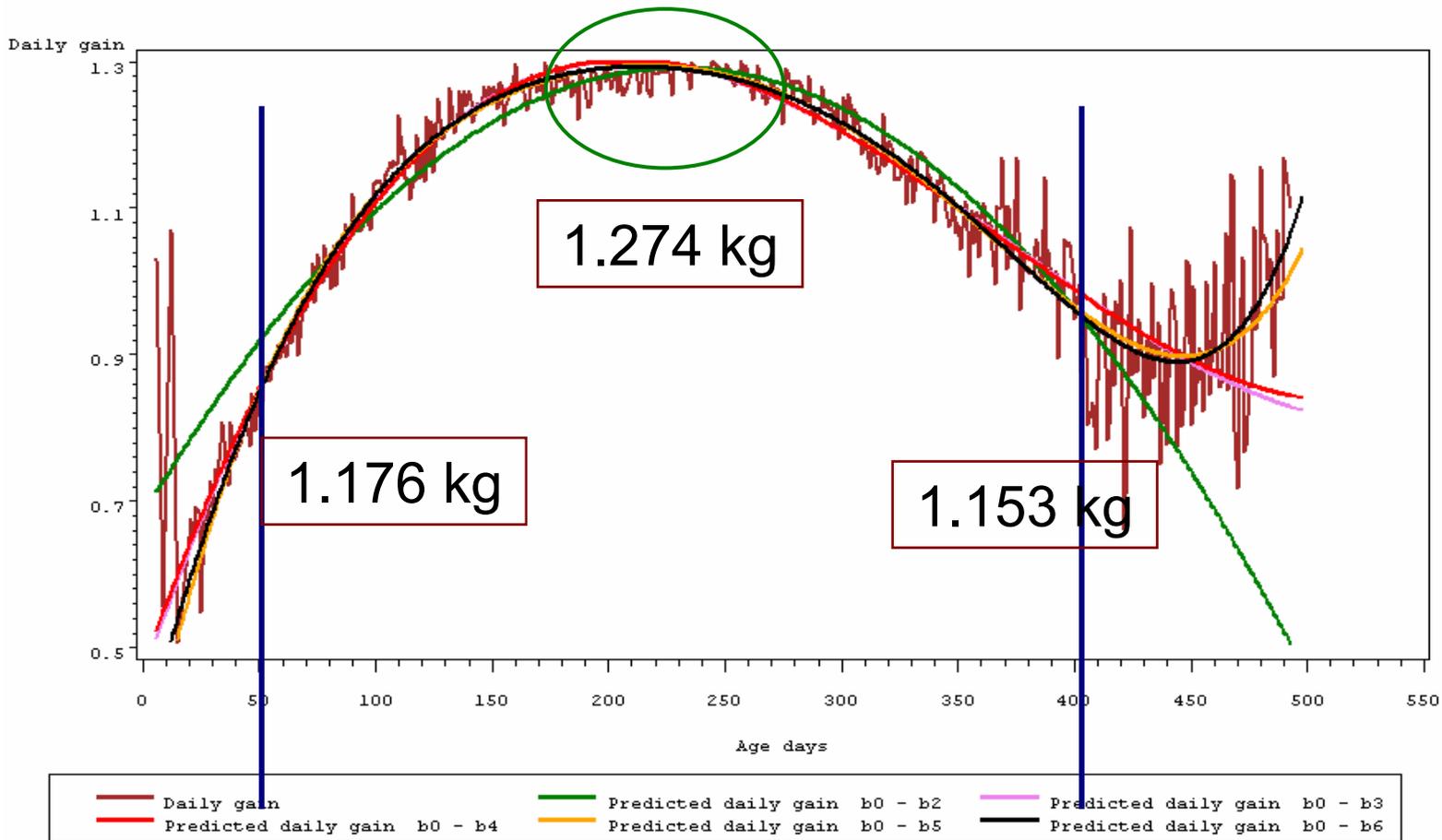
Therefore:

analysis of daily gain
in a short,

consecutive 30 - days intervals



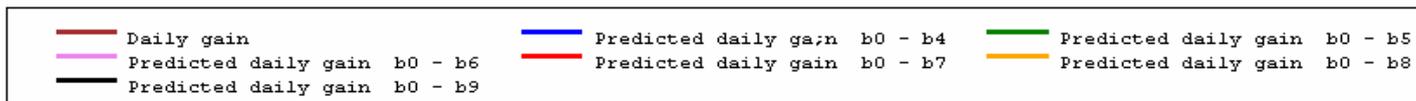
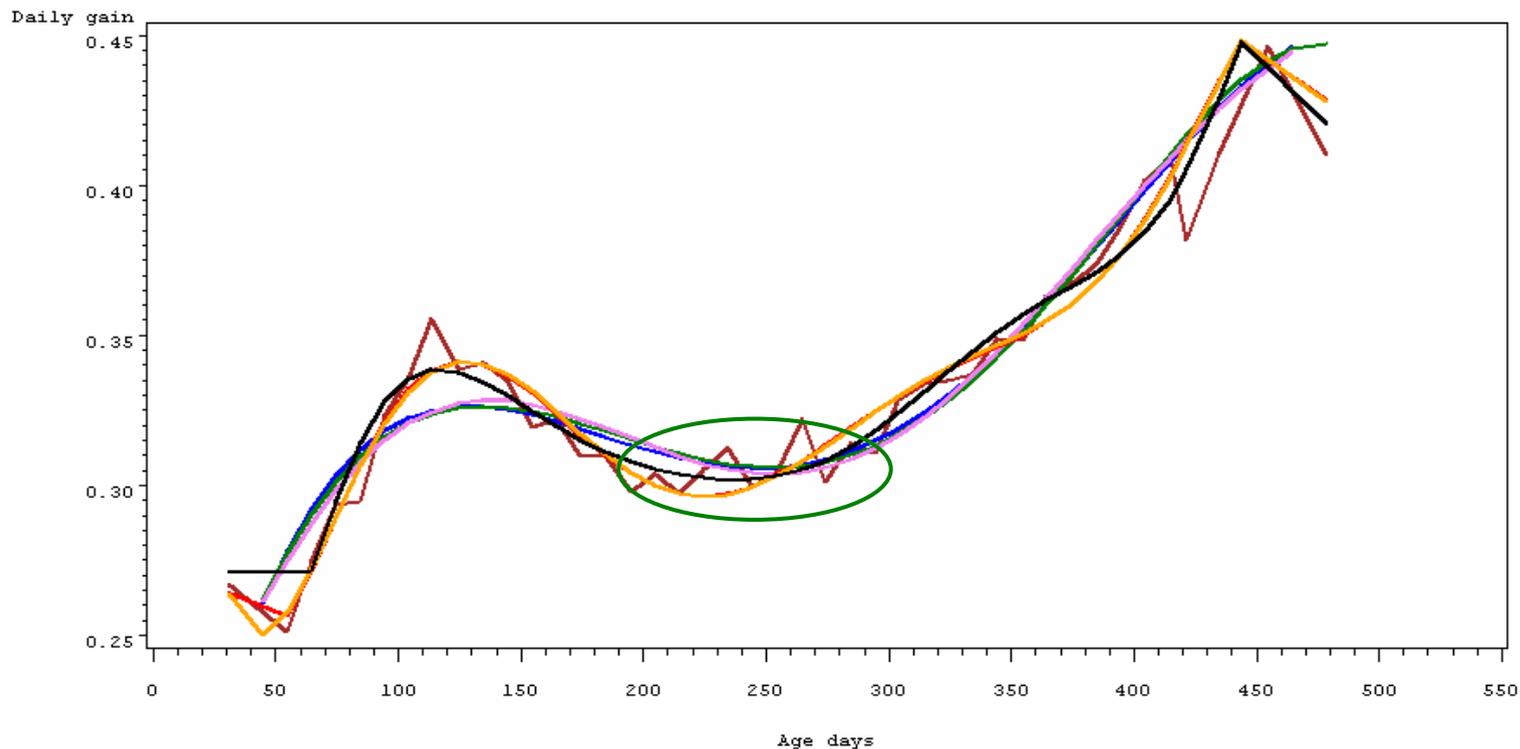
Daily gain (kg)



Average = 1.203 kg



Standard deviations of daily gain (kg) in 10-days intervals



Animals are limited by environment which causes:

- **upper limits of daily gain**
- **depression of variability in a moment of highest daily gain**



Correlations for daily gains in different partitions of growth

Growth recording – measured records

	200 - 300 days	300 - 400 days	100 - 400 days
100 - 200 days	0.10	-0.01	0.65
200 - 300 days		0.14	0.60
300 - 400 days			0.59



Segments of growth are independent ?



Possibility to use Random Regression Animal Model:

- decomposition of growth into components
- take into account the stage of growth



Evaluation with Legendre Polynomials (LP)

recorded daily gain in 30-days intervals

$$\mathbf{y} = \mathbf{HYS}_W + \mathbf{HYS}_B * \mathbf{LP} + \mathbf{A} * \mathbf{LP} + \mathbf{PE} * \mathbf{LP} + \mathbf{e}$$

animal

residuum

animal's permanent environment

station x year x 3-months period of birth

station x year x 3-months period of weighing



Correlation for daily gains in segments of growth

Breeding values – animals with production

	200 - 300 days	300 - 400 days	100 - 400 days
100 - 200 days	0.88	0.61	0.90
200 - 300 days		0.84	0.99
300 - 400 days			0.88

Measured records

100 - 200 days	0.10	-0.01	0.65
200 - 300 days		0.14	0.60
300 - 400 days			0.59





SVAZ CHOVATELŮ ČESKÉHO STRAKATÉHO SKOTU

- Home
- Zprávy
- Svaz
- Plemeno
- Šlechtění**
- Plemenná kniha
- Ke stažení
- Odkazy
- Zdraví zvířat
- RS 08

- ▶ Chovný cíl
- ▶ Šlechtitelský program
 - Selekční program
- ▶ Plemeníci
- ▶ Plemenice
- ▶ Užtkovost
- ▶ OPB-interní
- ▶ **OPB - plemenné hodnoty**

Domovská stránka > Šlechtění > OPB - plemenné hodnoty > OPB



OPB

Zadejte číslo zvířete: [Velikost písma](#)

Číslo zadejte v přesném tvaru (např. 79303168 nebo CZ000099410591)

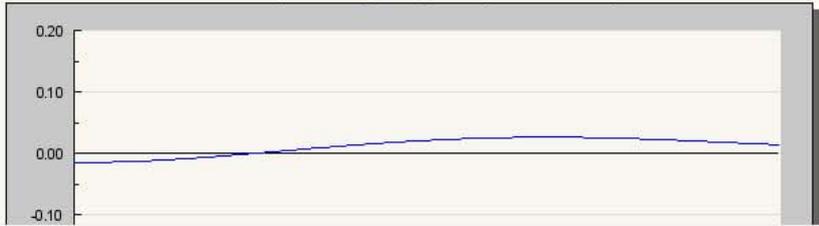
Plemenné hodnoty růstu z odchoven

Číslo zvířete : CZ000099410591 Poslední aktualizace dat : 06.05.2008

Poh.	Přír. v testu	Odchylka v testu	Přír. od nar.	Odchylka od narození
BÝK	0	0	0	0
Pl.S.	Datum narození	Otec-reg	Otec-jméno	Odchovna

	100.-199. den	200. -299. den	300. - 399. den	CELKEM - stejné váh. koef.
PH	-0.67	1.94	2.13	3.40
RPH	97.19	106.15	107.93	104.36
směr. odch.	-0.23	0.51	0.66	0.36

PH denních přírůstků v kg/den v jednotlivých dnech stáří býka



Přehled cen

Býci U3 (320-410 kg) - SRN

Hlasujte...

Jaký očekáváte vývoj ceny mléka ve Vašem podniku?

Pokles 59%

Beze změn 22%

Nárůst 19%

Newsletter

Zaregistrujte se pro odběr informačních e-mailů...

Napsali iinde...

Reklama



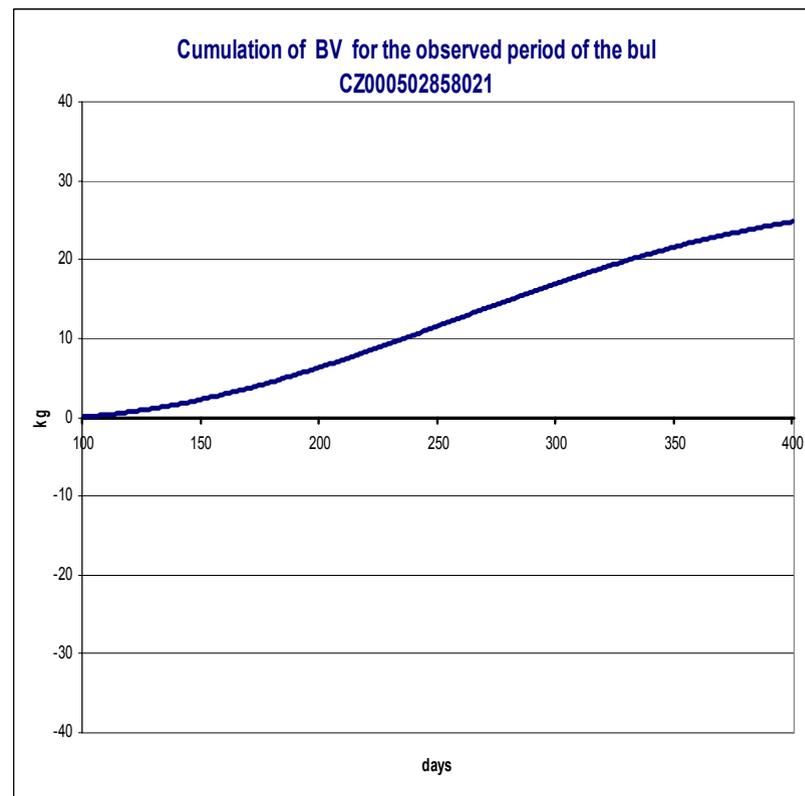
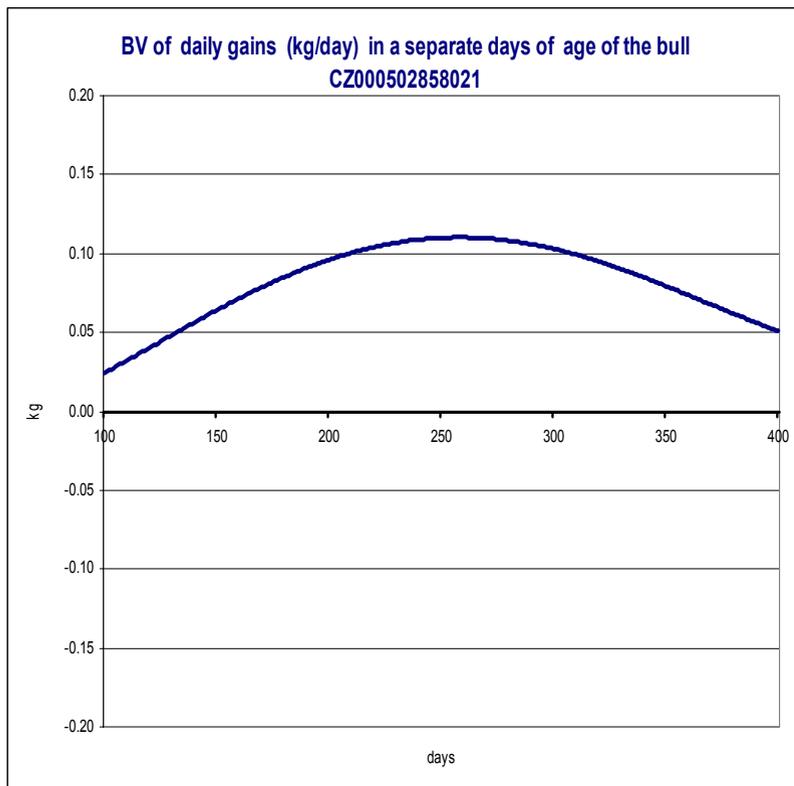
IX. Národní výstava

Den českého strakatého skotu

18.9.2008
Radešinská Svratka



IDENTIFICATION OF ANIMAL:	Sex.	Gain in test	Deviation	Gain from birth	Deviation2
CZ000502858021	1	1478	129	1400	136
Breeder:	PLS.	Date of birth	Sire-reg	Sire-name	Station
ZD Krásná Hora, a.s.	C1	27.1.2005	RAD-099	RUMBA	Osík
Evaluation: 6 March 2007	I N D E X O F G R O W T H				
	100.-199. days	200. - 299. days	300. - 399. days	TOTAL –the same coefficients	
Sum of BV for segment	6.24	10.64	7.88	24.76	
Expressed in SD	2.26	2.87	2.56	2.76	







Our motion

- Extend the data sources for daily gain of the progeny
- BV for growth use as a selection criteria for the young bulls before the enter AI



Thank you for your attention!

