

What's New in NALF Genetic Evaluation

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Road Map

- **Bolt Update**
 - Calving Ease and Growth
 - Carcass
- **Spring 2018 Genetic Evaluation**

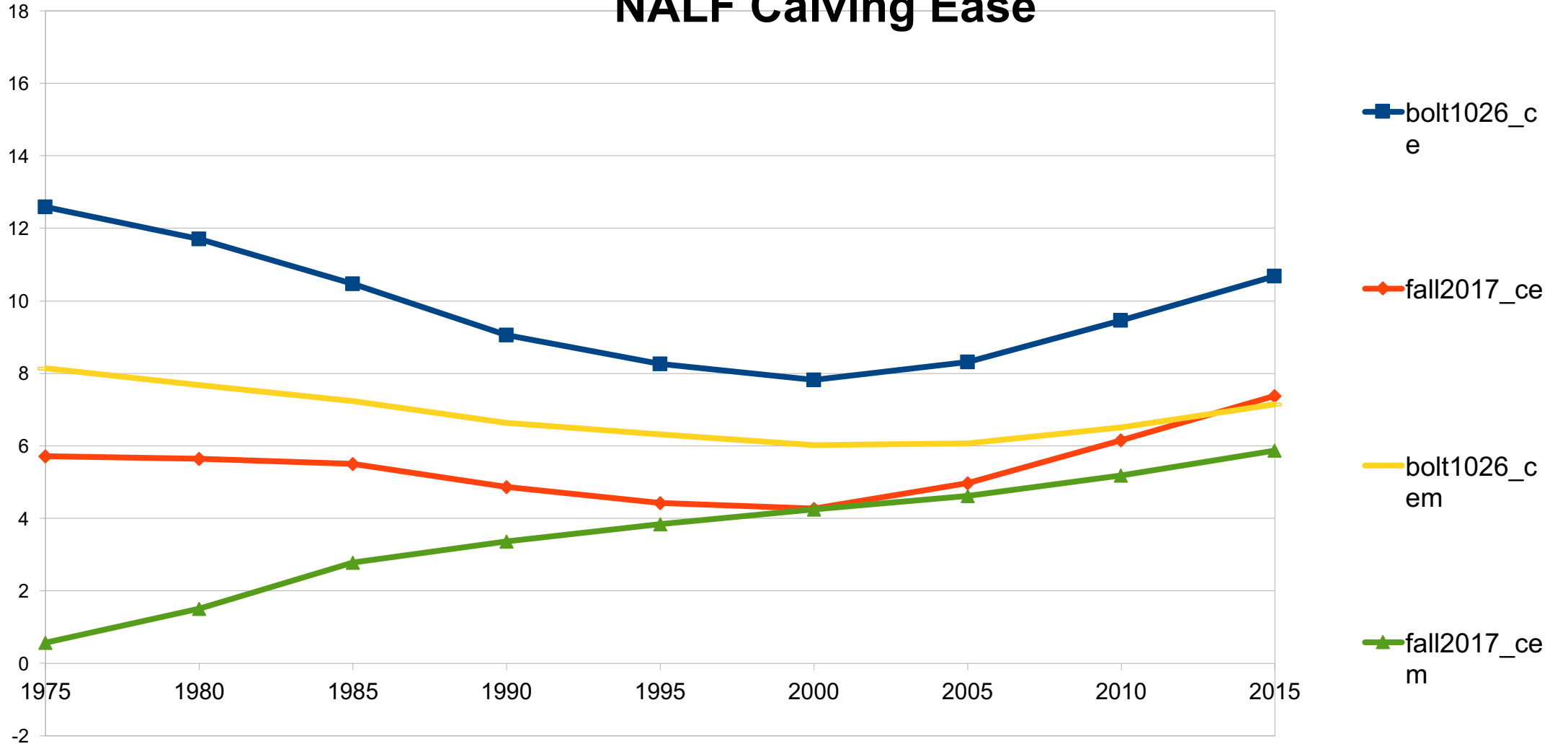
What is BOLT: Key Features

- **Single Step Incorporation of Genomic Information**
 - All results are imputed to 50K
 - Genomic Impact up and down the pedigree
 - Weekly EPD Update
- **What to expect?**
 - Slightly Narrower range of EPDs
 - Slight decrease in accuracy

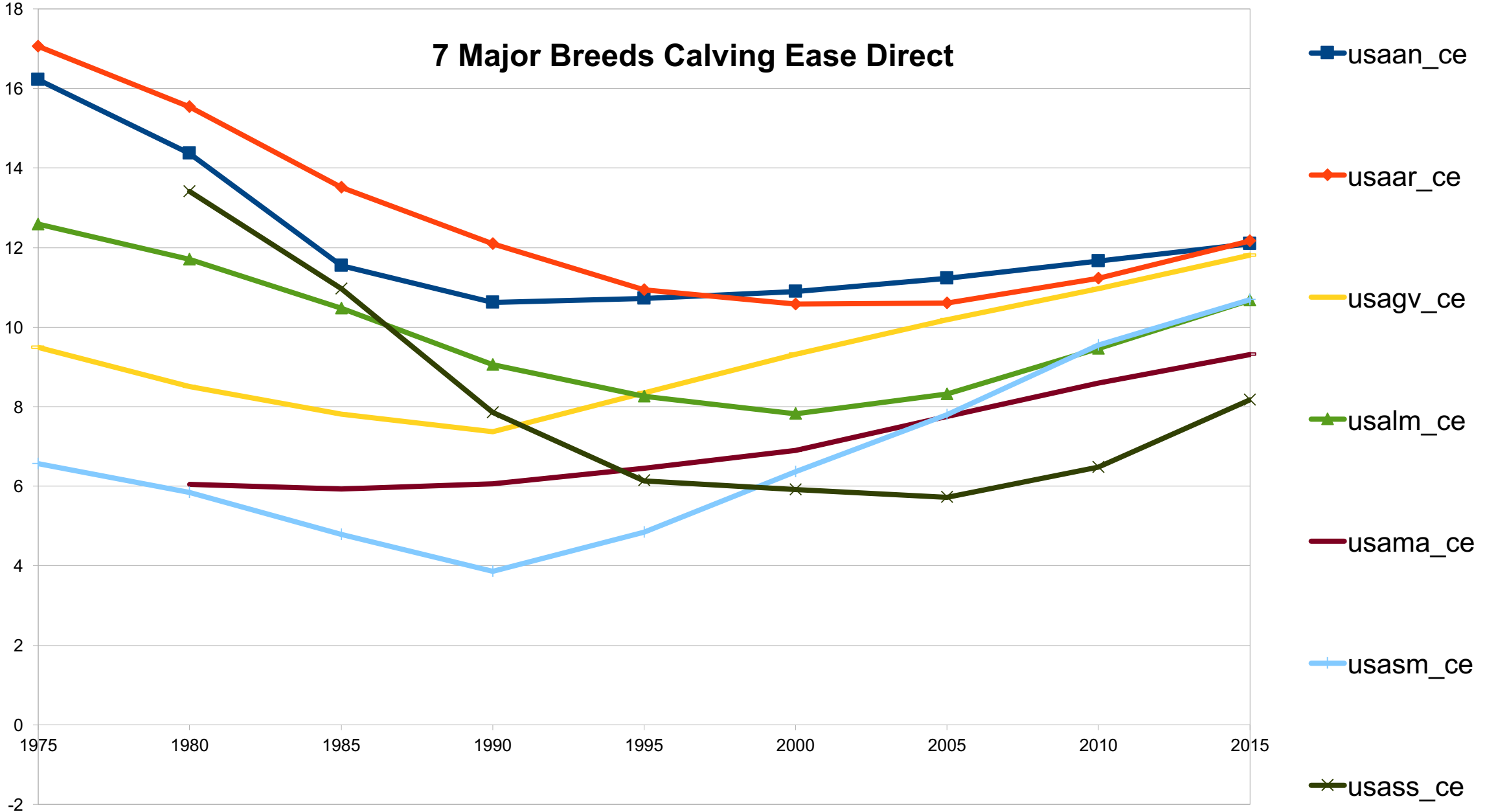
Other BOLT items of note

- **Breed contrasts**
 - Calving ease and growth estimated from IGS cooperating breed data
 - Carcass adjusted to match US-MARC 2014 contrasts
- Development of 'Master Database' for breeds to upload new and changed records to eliminate extract errors
- Pipeline for genomics from service provider directly to IGS
- Pipeline construction for automated pre-processing and data edits
- Development of diagnostic tools for post evaluation animal inspection
- Inclusion of ET animals (methodology already deployed in Hereford BOLT)

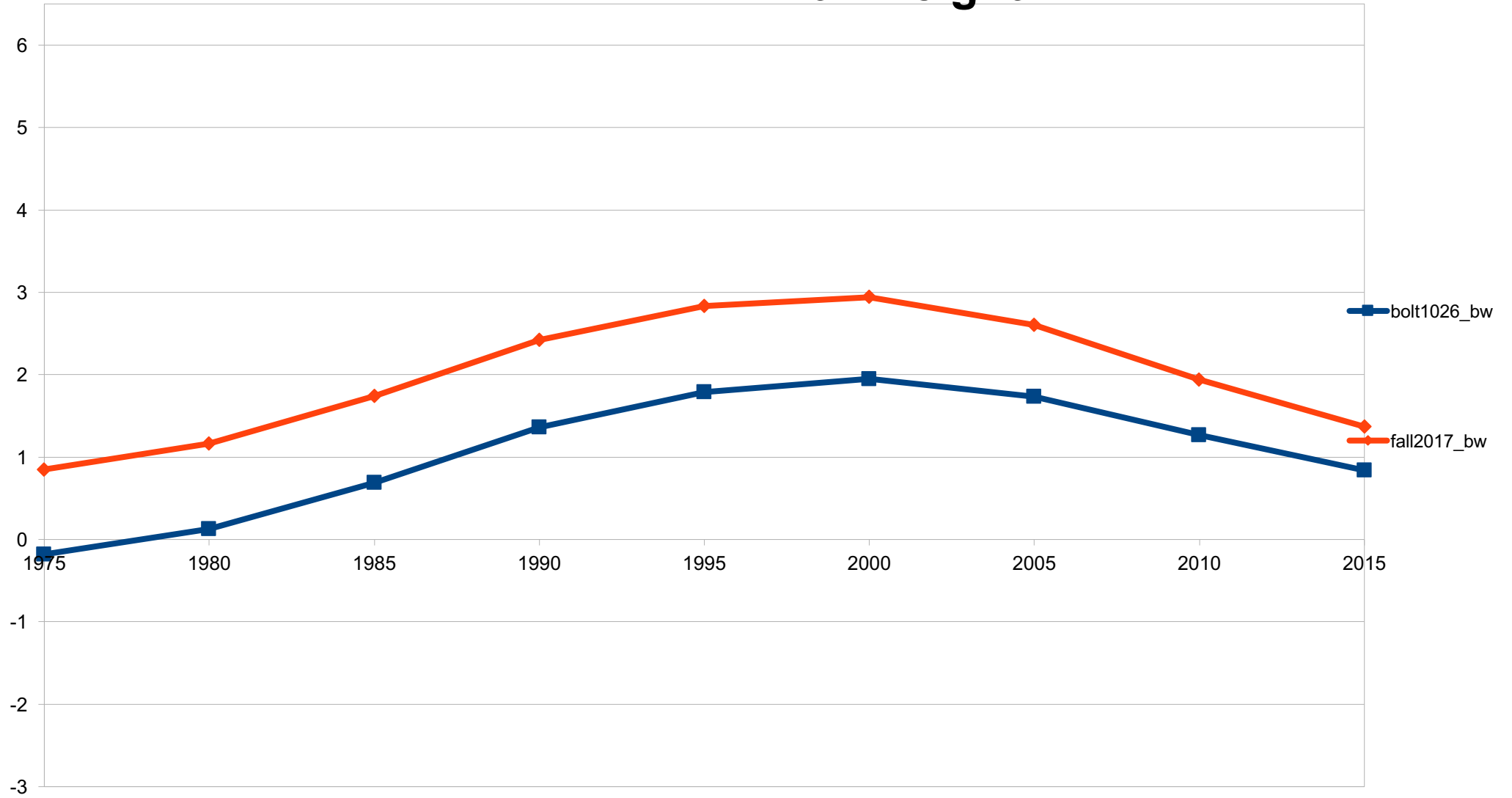
NALF Calving Ease



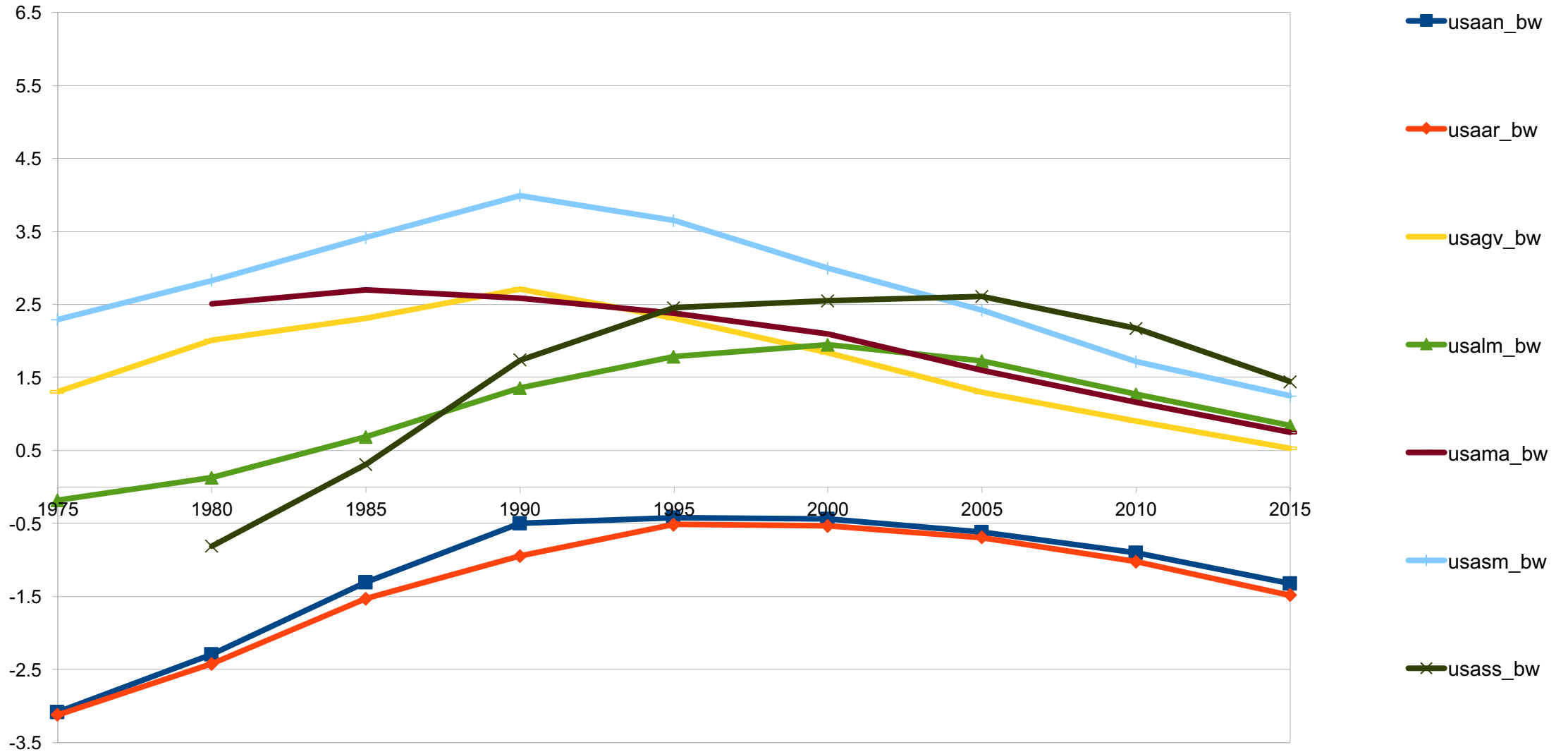
7 Major Breeds Calving Ease Direct



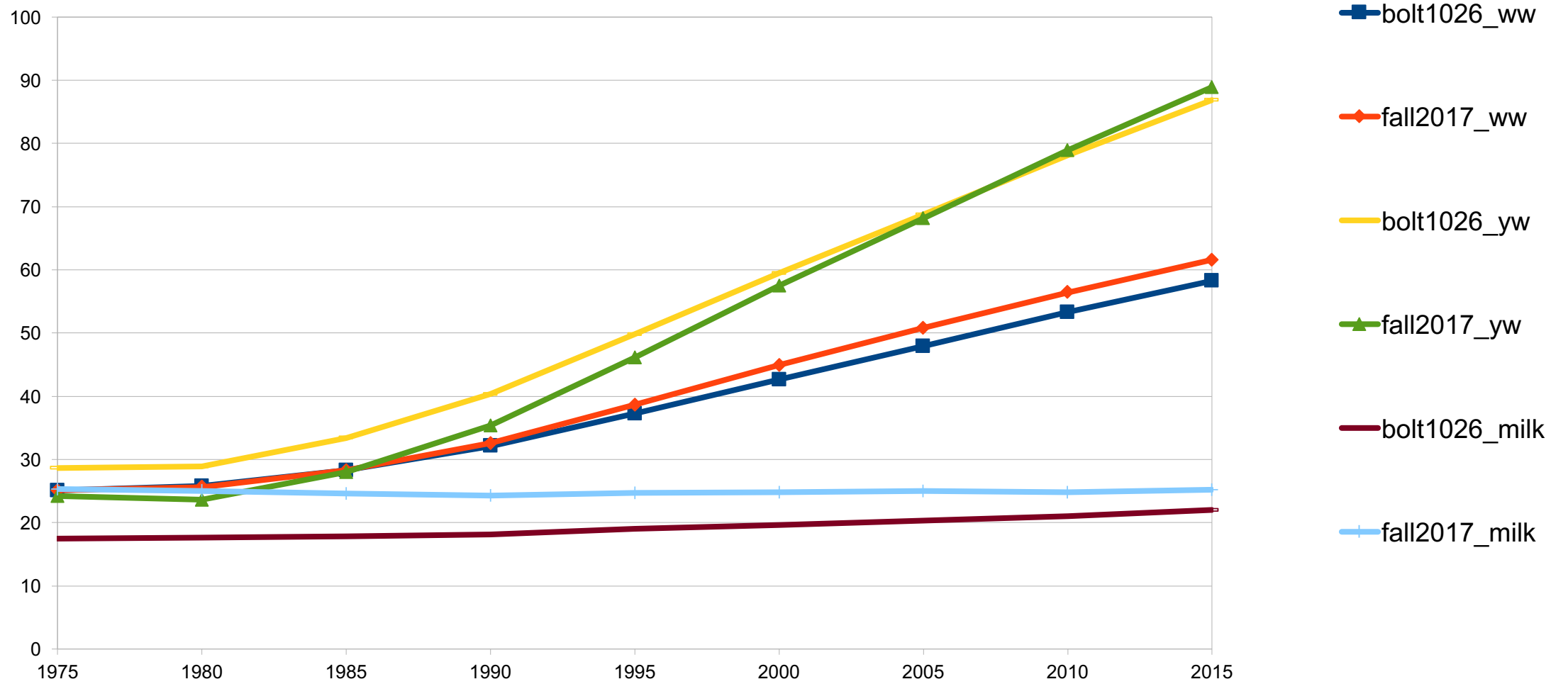
NALF Birth Weight



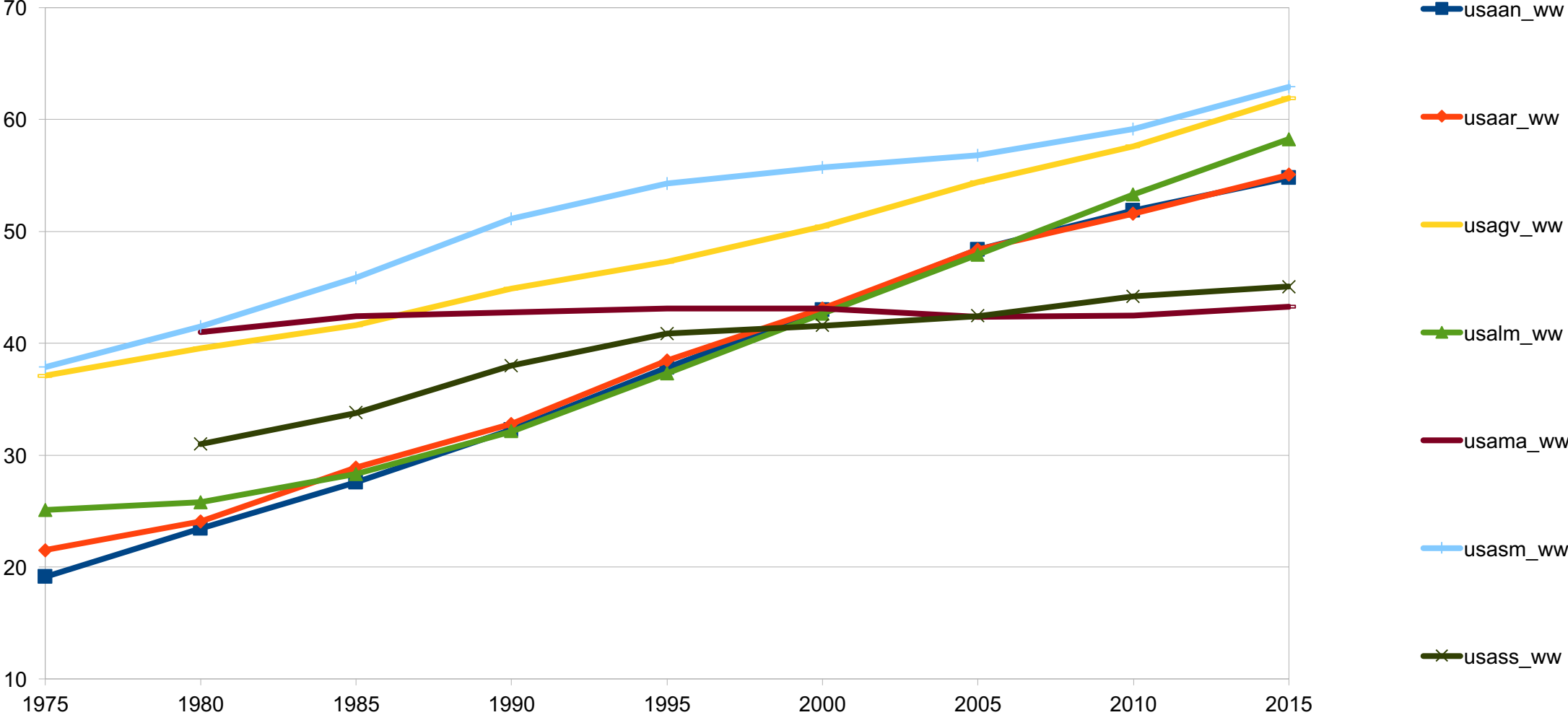
7 Major Breeds Birth Weight



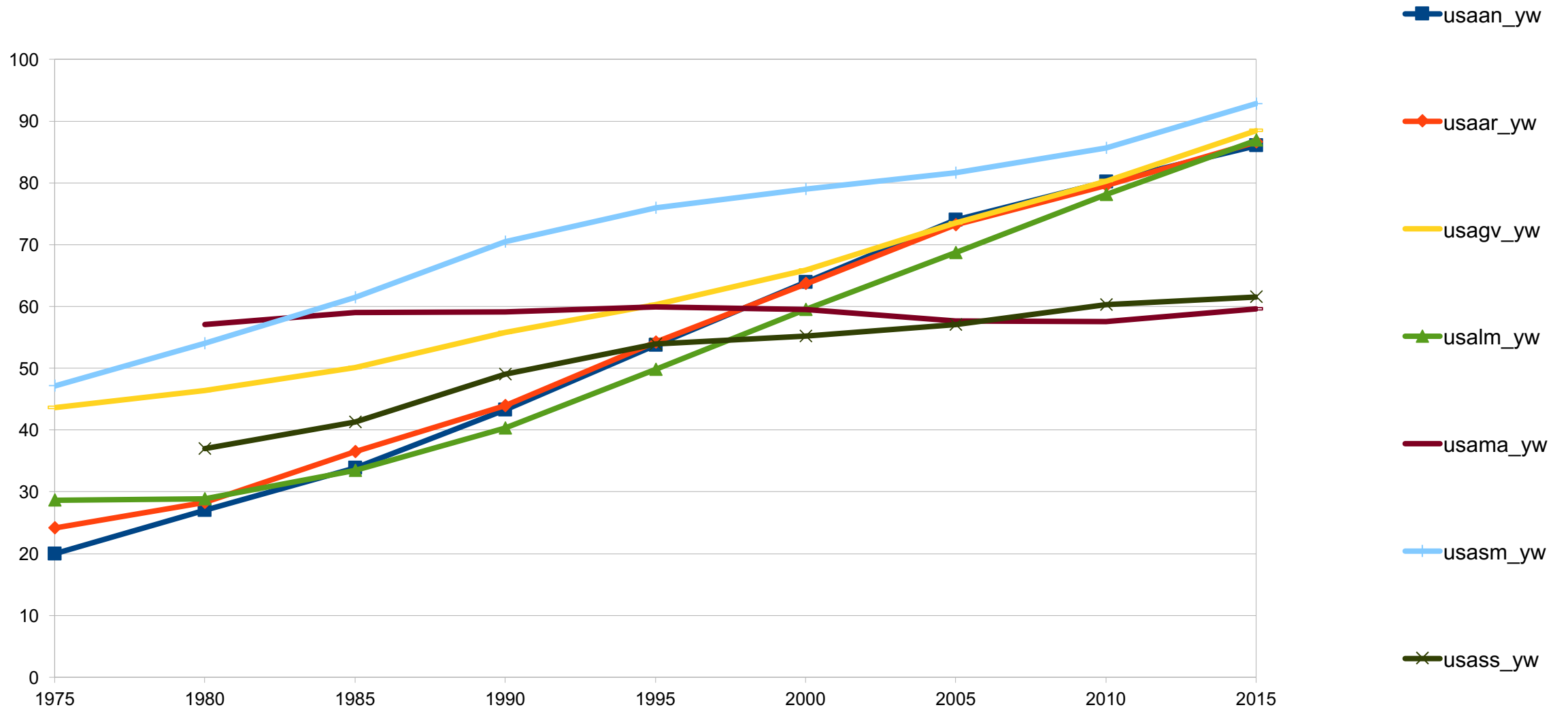
NALF Weaning, Yearling, Milk



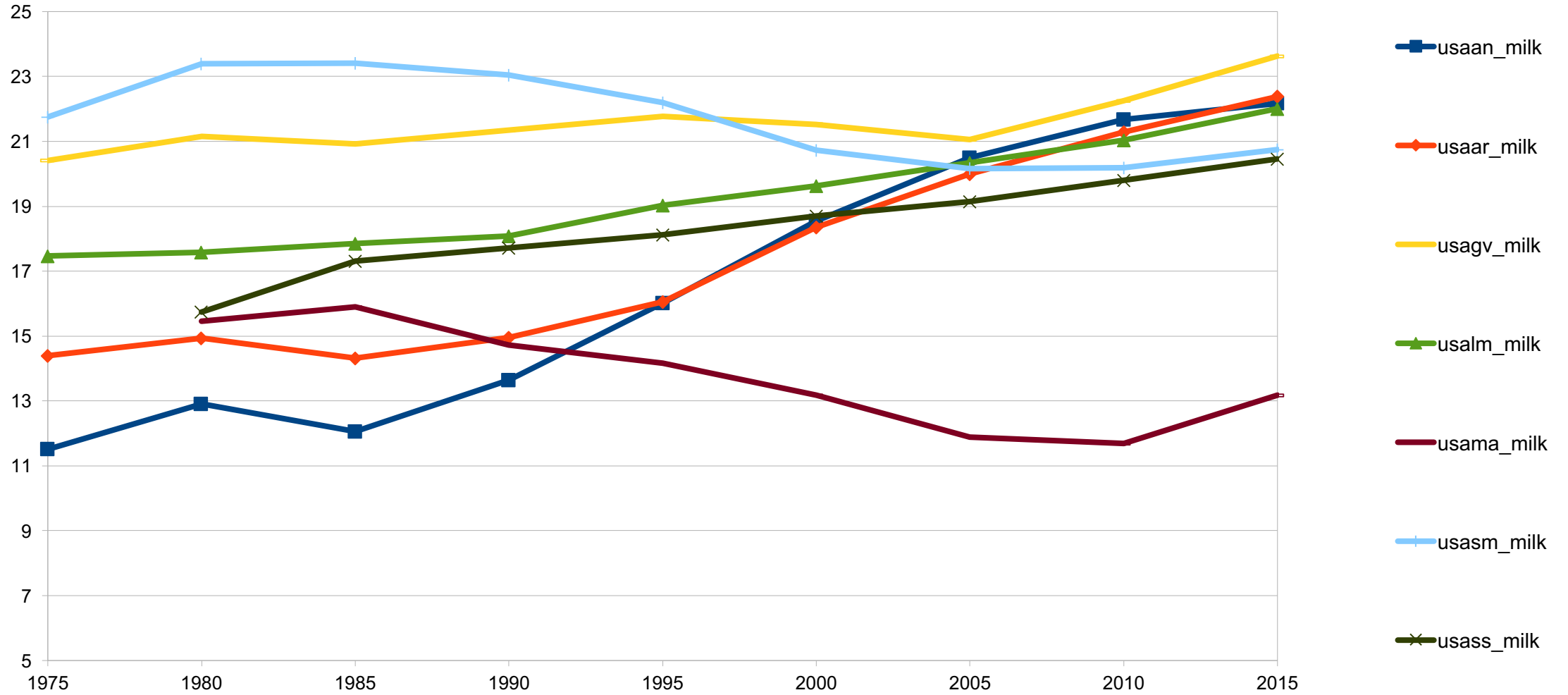
Weaning Wt



Yearling Wt



Milk



Progeny equivalents (PEs) for increase in accuracies of GE-EPDs for growth traits.¹

Trait	BW	WW	YW	Milk	TM
All	11	12	11	14	14
SIM	11	12	11	14	15
RAN	11	12	11	14	14
GVH	10	11	11	13	13
LIM	8	11	10	16	16
BSH	8	9	8	12	13

¹The PEs are adjusted for differences in accuracies of parents' accuracies. See the appendix (excel file) for details.

Quick Summary

- Growth/Calving Ease look good
 - Some decrease in Acc
 - Narrower spread in EPDS → pull back of outliers
- More “bang” for your genomic buck
 - Spreads genomics up and down the pedigree
 - Twice as much information from markers
 - Imputation → more value from LD and ULD tests

The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. A prominent red callout box is centered on the page, containing the text "Spring 2018 Evaluation".

Spring 2018 Evaluation

Spring 2018 IGS Cornell NCE Results- NALF Purebreds

	Calving Ease Direct			Birth Weight			Weaning Weight		
Birth year	Corr	New Avg	Old Avg	Corr	New Avg	Old Avg	Corr	New Avg	Old Avg
2014	0.992	6.58	5.99	0.996	2.11	2	0.996	61.99	60
2015	0.993	6.72	6.13	0.995	2.05	1.95	0.994	62.76	60.79
2016	0.991	7.19	6.59	0.994	1.9	1.82	0.986	63.73	61.91
2017	0.987	6.93	6.29	0.987	2	1.92	0.901	65.67	63.86

	Yearling Weight			Calving Ease Maternal			Milk		
Birth year	Corr	New Avg	Old Avg	Corr	New Avg	Old Avg	Corr	New Avg	Old Avg
2014	0.997	86.83	83.37	0.979	5.18	5.44	0.967	25.63	25.69
2015	0.995	88.31	84.89	0.955	5.2	5.45	0.949	25.57	25.74
2016	0.985	90.42	87.18	0.967	5.44	5.67	0.957	25.73	25.91
2017	0.932	94.36	91.05	0.979	5.56	5.93	0.93	26.31	26.66



Thank You