

Genetic Evaluation Validation

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What is IGS?

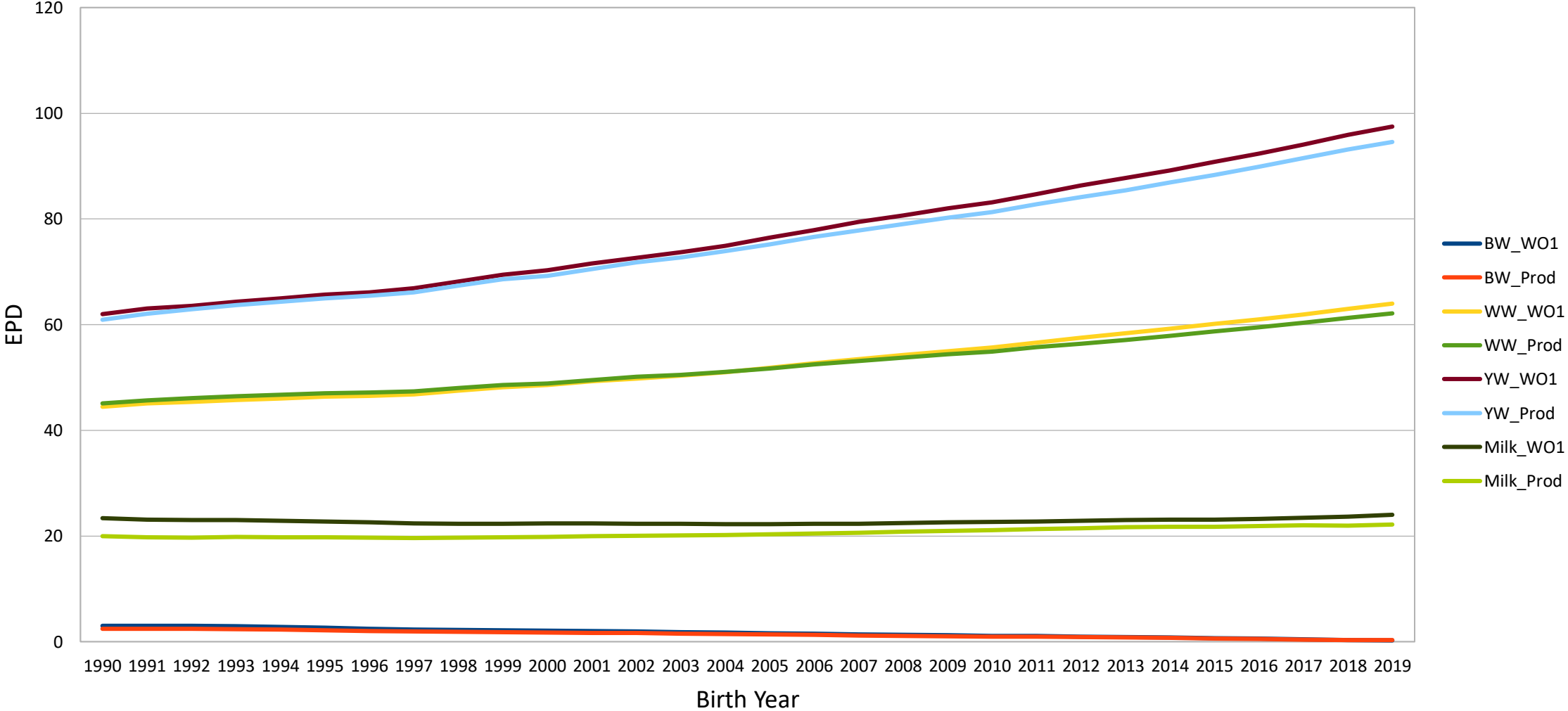
- Multi-breed Genetic Evaluation
- 19M Published EPD
- 20 Partners

Update Growth Evaluation

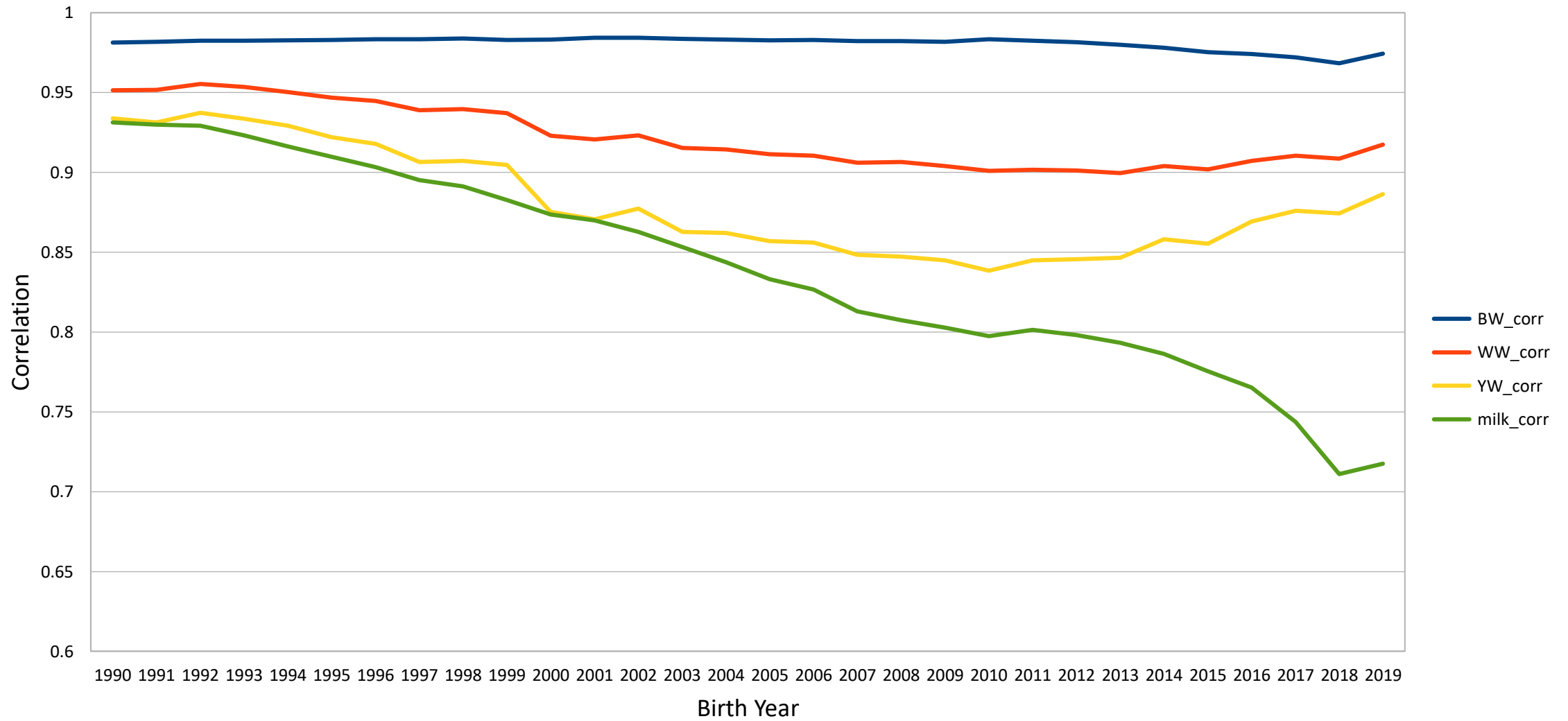
- August 2020 implemented WO1
 - Updates to the IGS evaluation for growth traits
 - Increase in marker subsets and improvements to estimation of marker effects
 - Accounts for different methods of birth weight collection
 - Genetic correlation between milk and weaning weight set to 0
 - Heterogenous variance set to male base

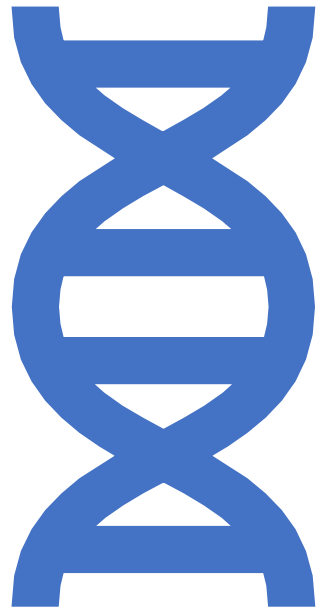


IGS EPD Means Production and WO1



Correlations between Production and WO1





Validation

- To evaluate the predictive ability of both WO1 and Production models
 - Growth phenotypes and CG for animals born 2018 or later were “masked”
 - Production and WO1 evaluation were run with masked phenotypes
 - Pearson correlation between EPD and phenotypes of test animals
 - Used to compare predictive ability of different evaluations

Validation

- Challenge: What is the phenotype for MILK?
- Pearson correlation between calf residual WW phenotype and expected WW



Validation

- Tested each individual change
 - Tested CG Changes
 - Tested new marker subset



WO1 Validation Results

	N	Production	WO1
Birth Weight	264,915	0.50	0.52
Weaning Weight	171,577	0.34	0.38
Yearling Weight	53,498	0.37	0.45
Milk	171,577	0.39	0.42

* Correlations for milk from Cornell system 0.28



Beta Testing

- Changes to the evaluation are Beta tested
- Traits correlated to growth were examined in Beta test
- Beta results released to IGS partners
- Current Beta test is correlated to the previous Beta as well as production

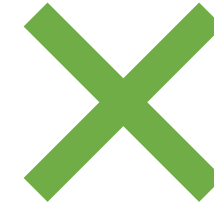
Week to Week Evaluation Stats



Correlations to previous
run



EPD Averages



Base Adjustments



WO1 Implementation

- Feedback has been positive
- Most common change in EPD due to change in marker effects



Questions

