Singlestep vs current evaluation for Type traits - with focus on udder

Assumptions

Blending of foreign information in the reference group

Genotype cut by birth class 2005

- Genotypes for older animals excluded

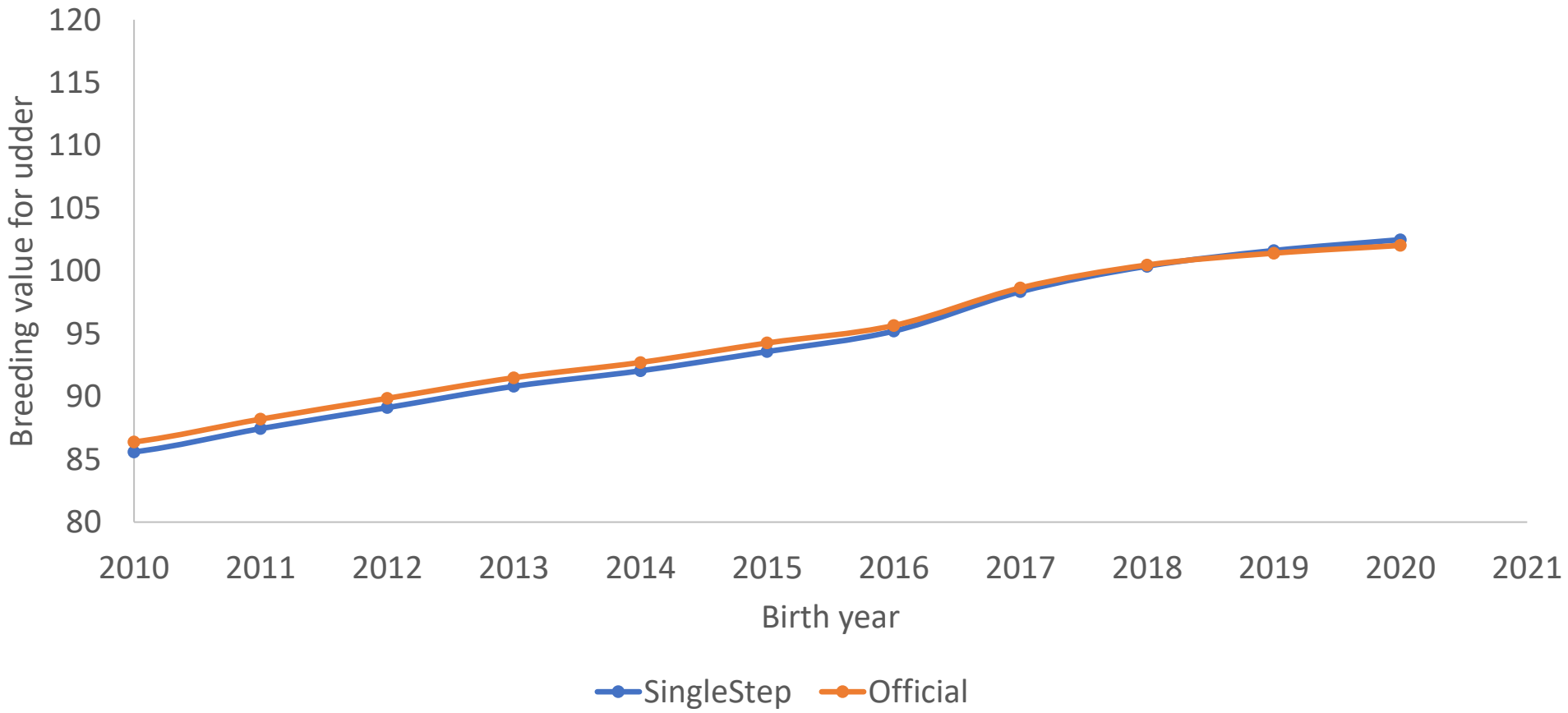
STØTTET AF
Mælkeafgiftsfonden
SEGES INNOVATION

Results

- Three groups of animals
  - Nongenotyped cows
  - Genotyped females
  - AI bulls
- Results as
  - Genetic trend
  - Correlations
  - Distribution of differences

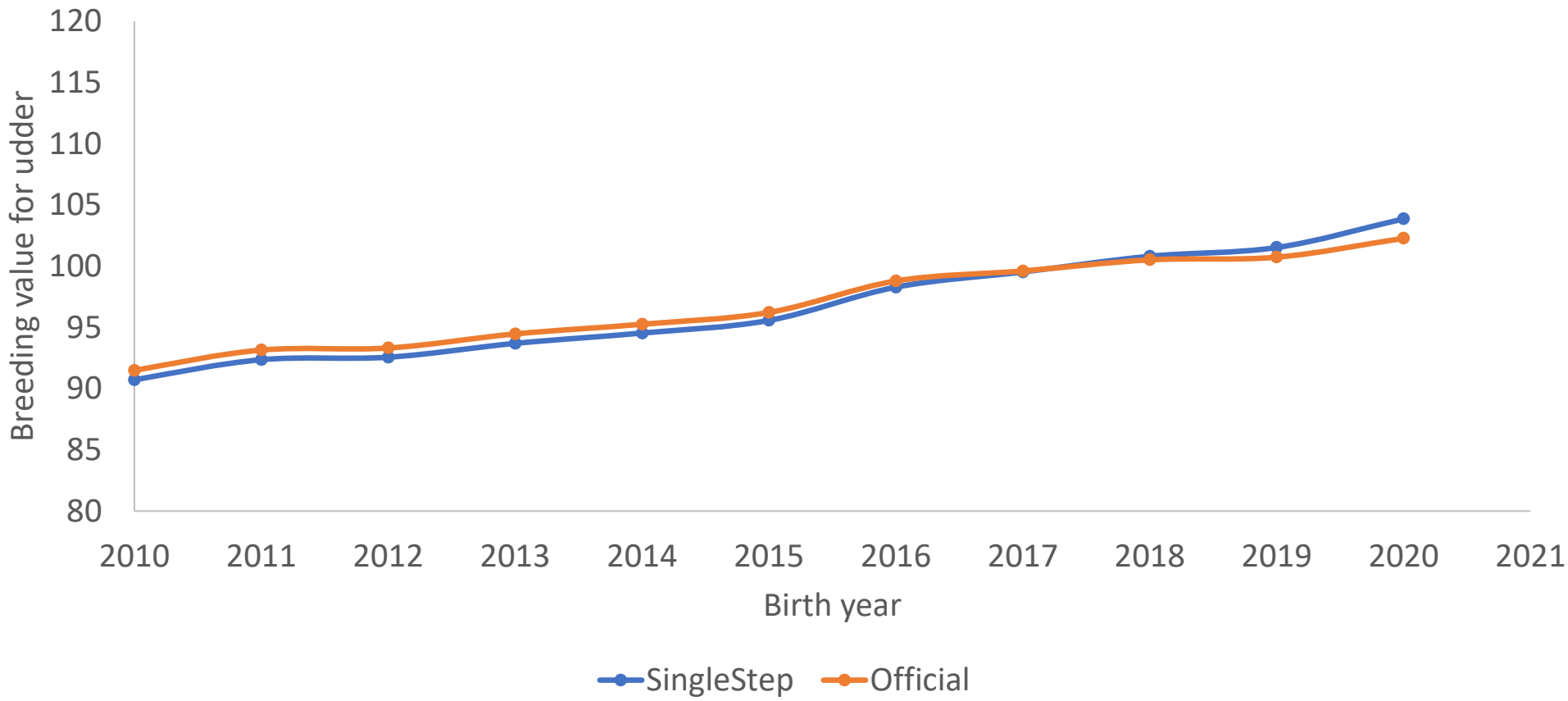
SEGES INNOVATION

HOL nongenotyped cows - udder



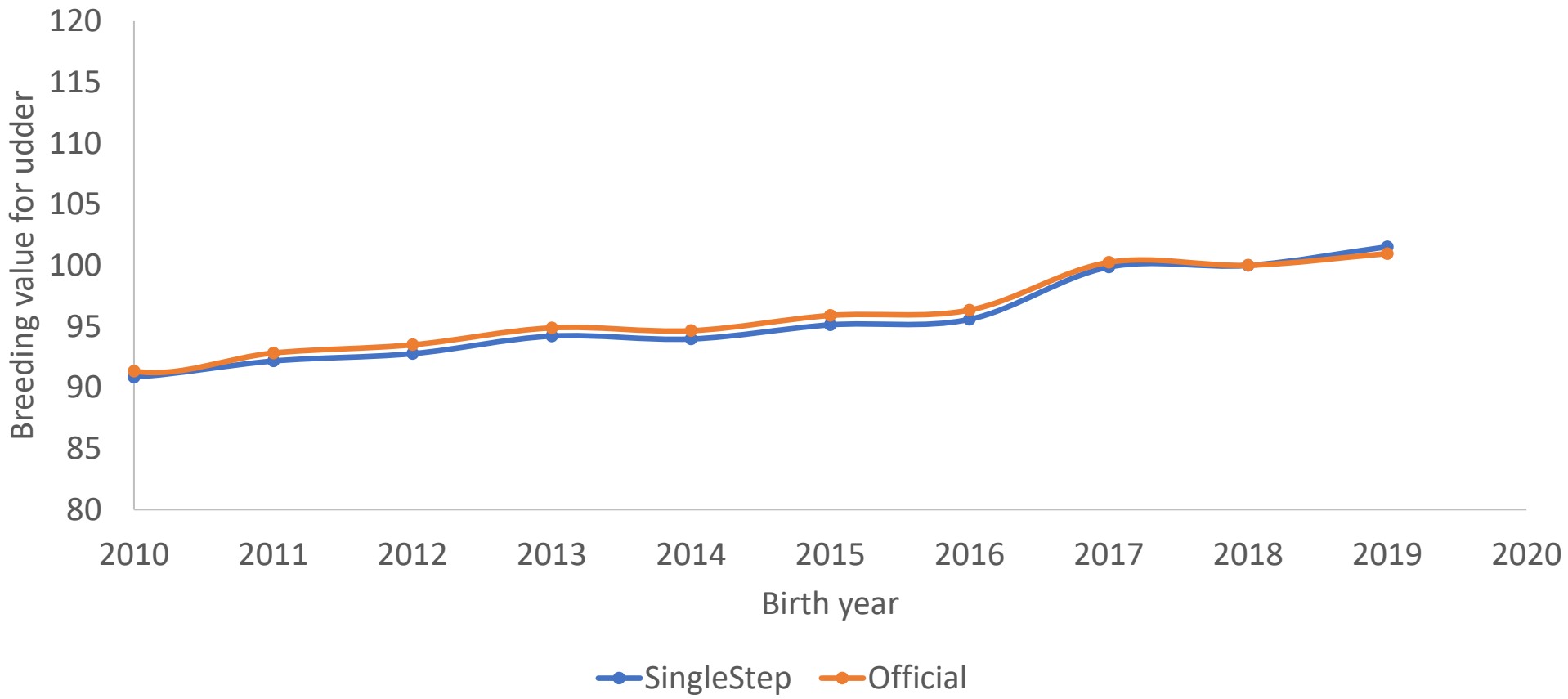
SEGES INNOVATION

RDC nongenotyped cows - udder



SEGES INNOVATION

JER nongenotyped cows - udder

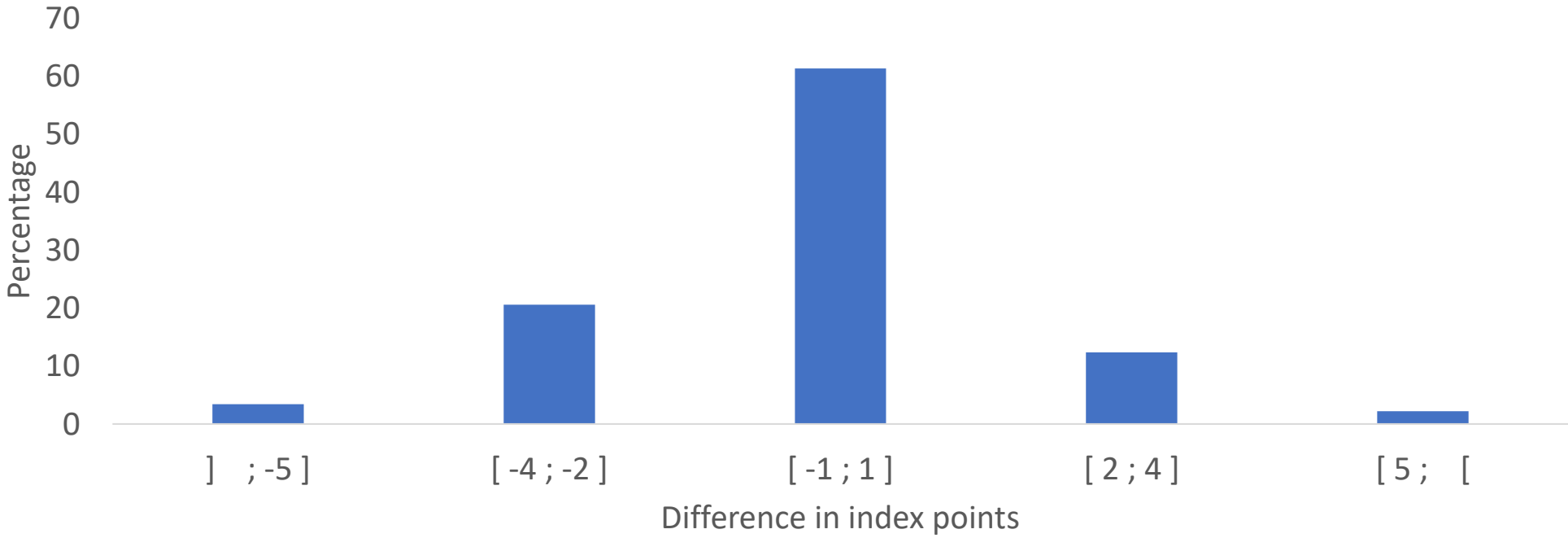


SEGES INNOVATION

HOL nongenotyped cows - udder

Correlations	Birth year	udder
	2010 - 2019	0.95 - 0.97

Distribution of differences for females born >=2015

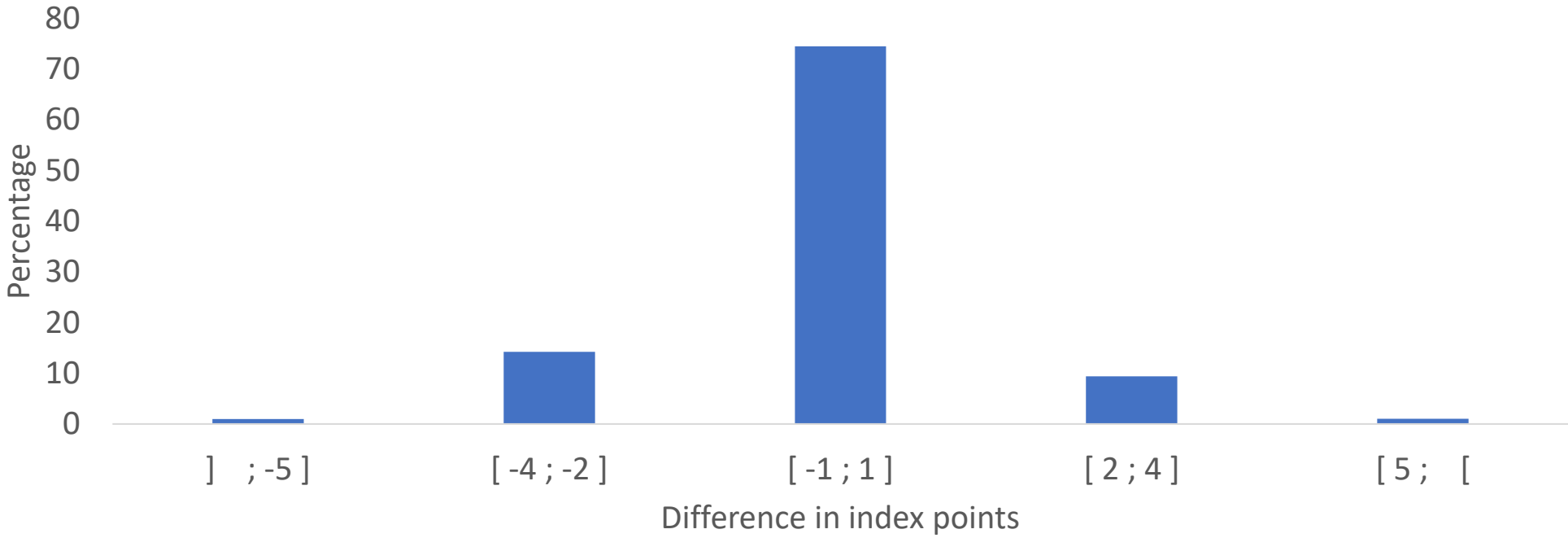


SEGES INNOVATION

RDC nongenotyped cows - udder

Correlations	Birth year	udder
	2010 - 2019	0.94 - 0.98

Distribution of differences for females born >=2015



SEGES INNOVATION

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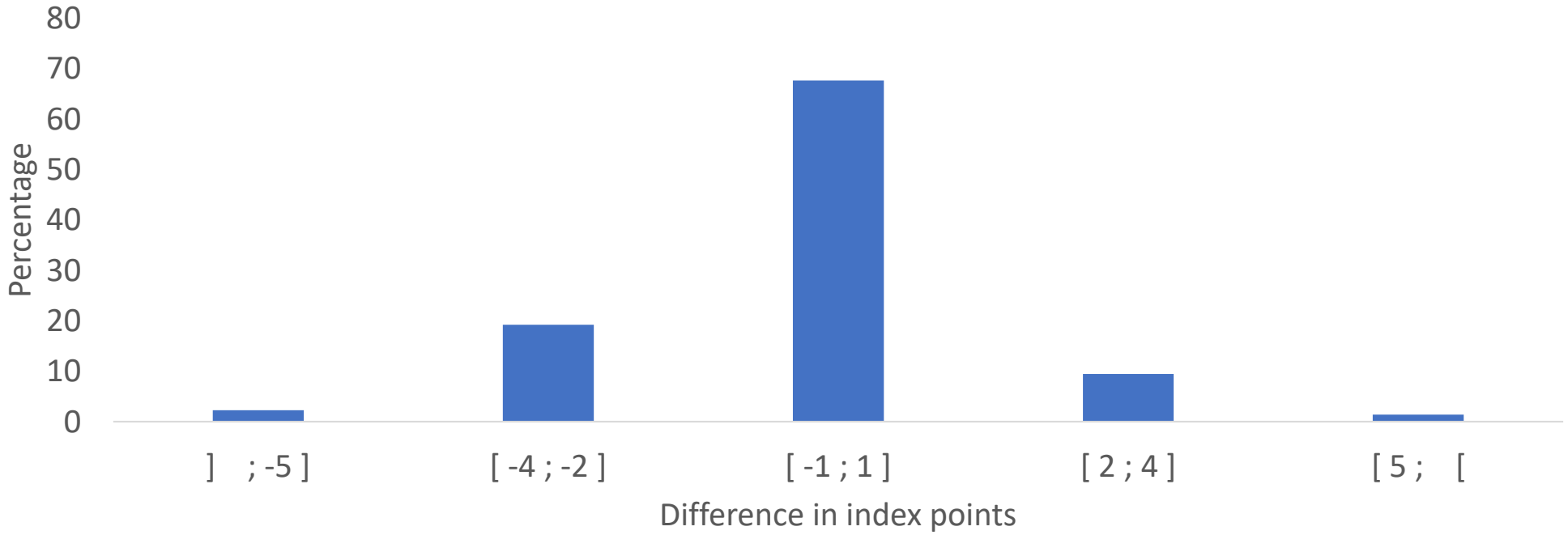
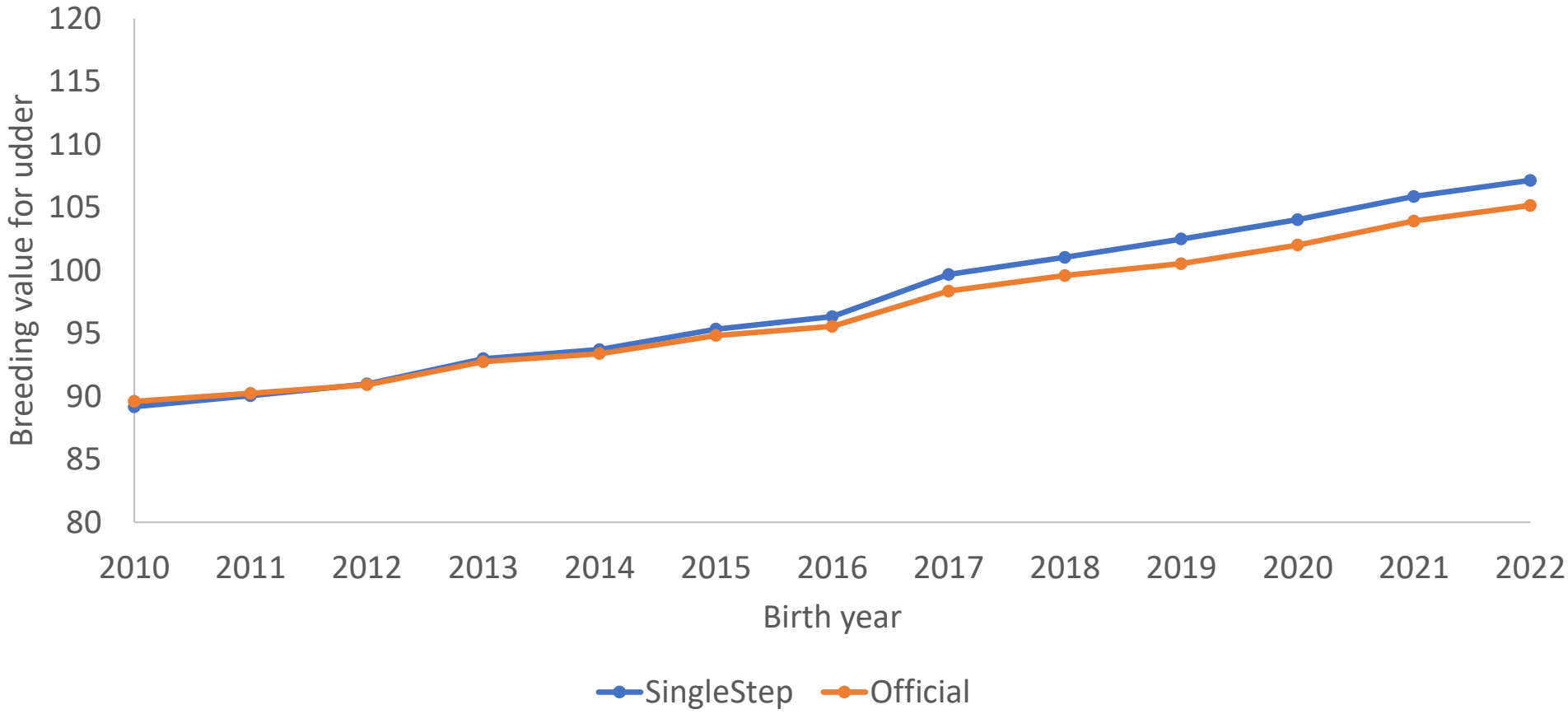
Distribution of differences for females born >=2015



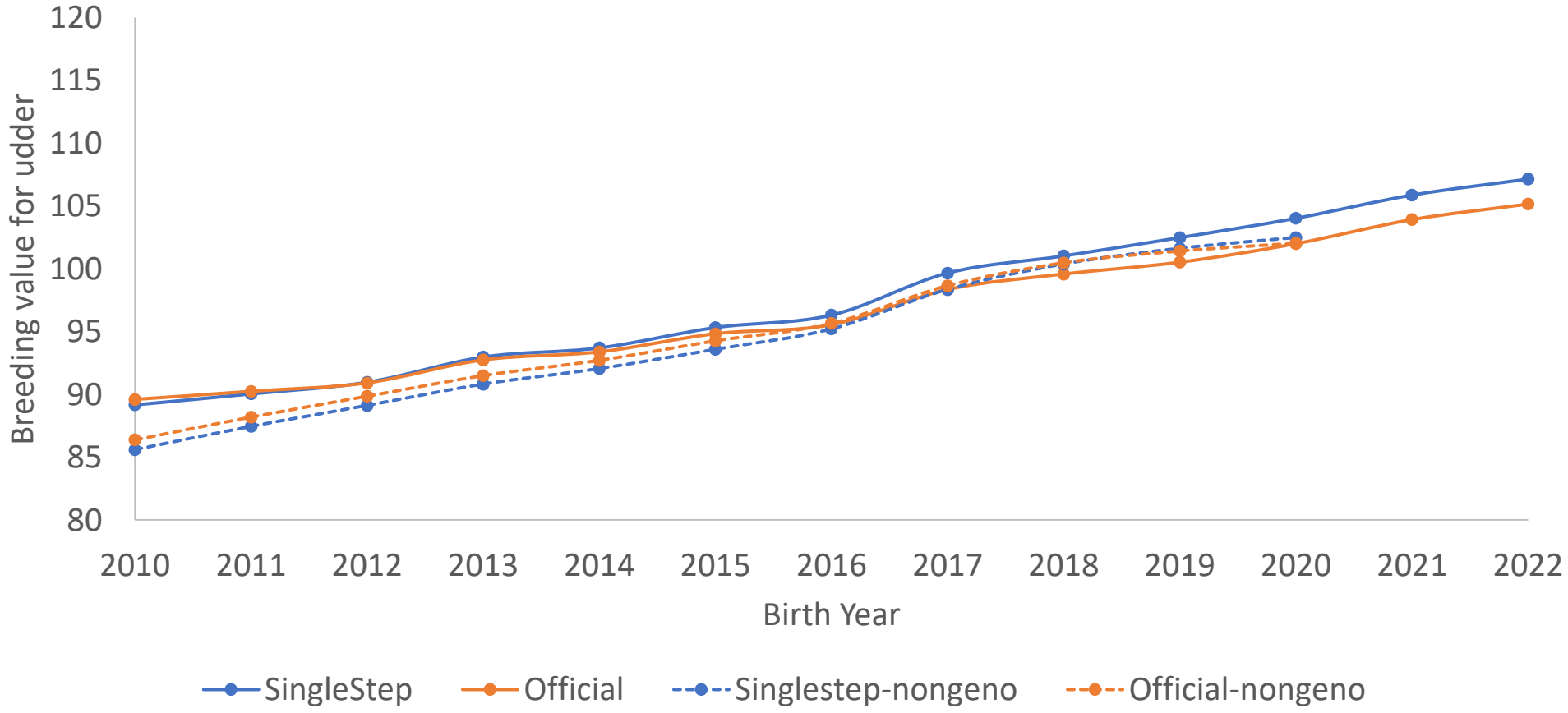
SEGES INNOVATION

HOL genotyped females - udder



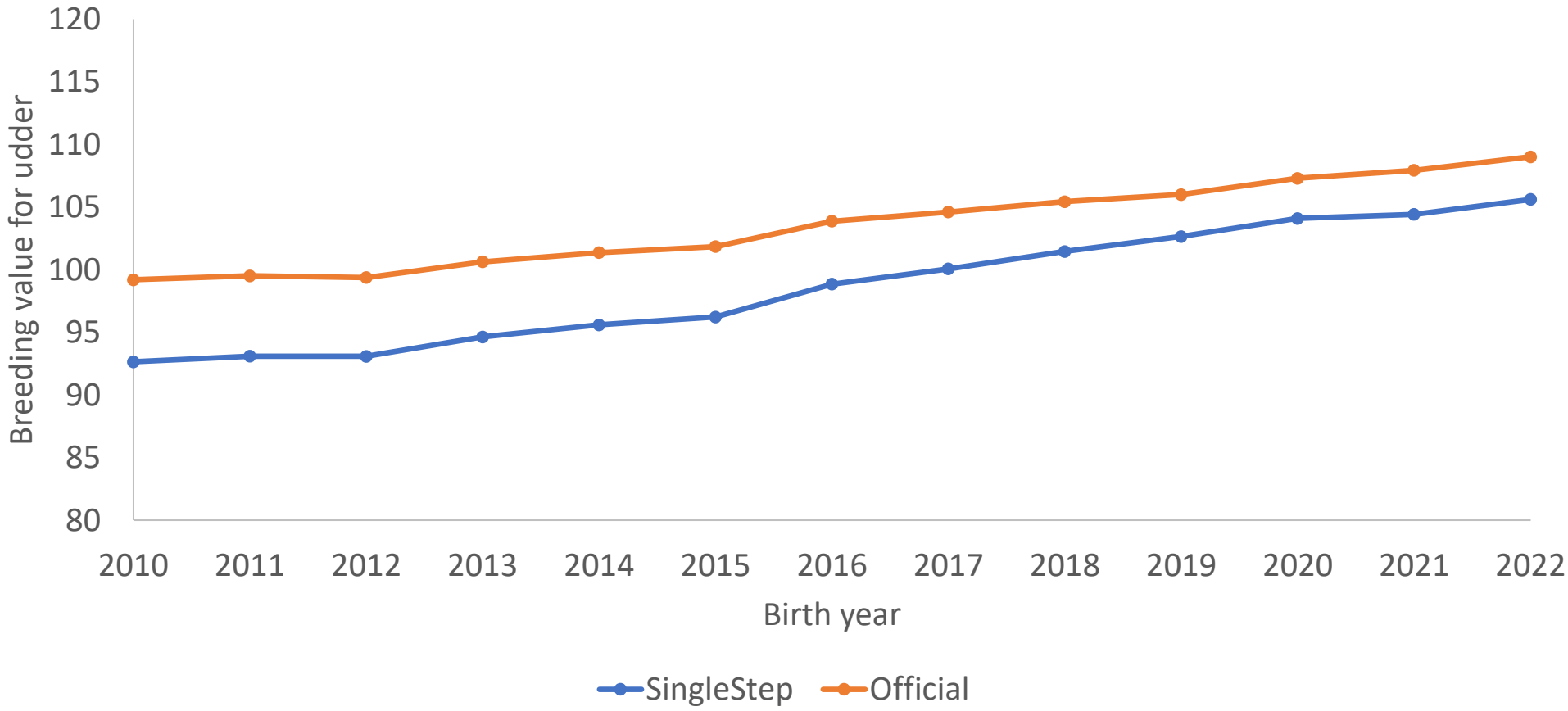
SEGES INNOVATION

HOL genotyped females - udder



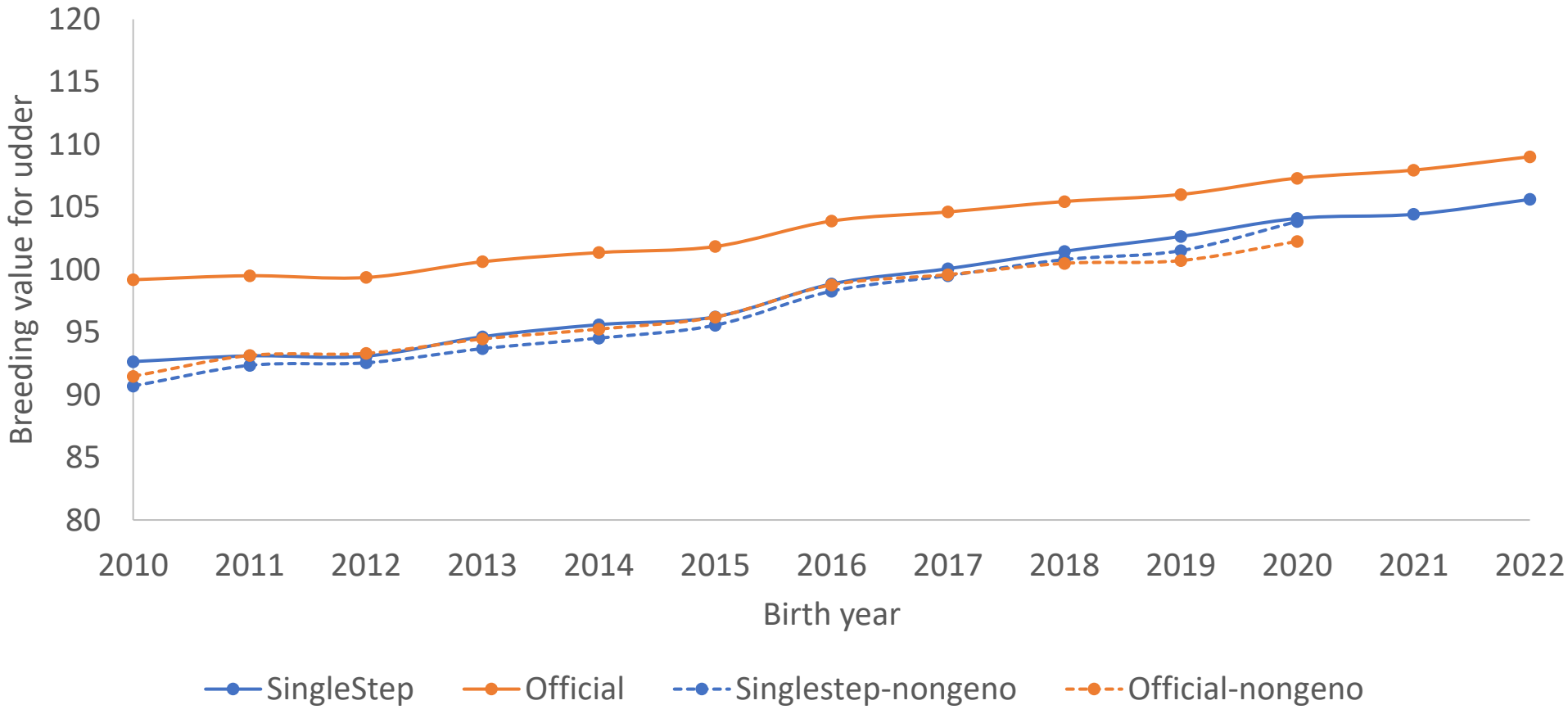
SEGES INNOVATION

RDC genotyped females - udder



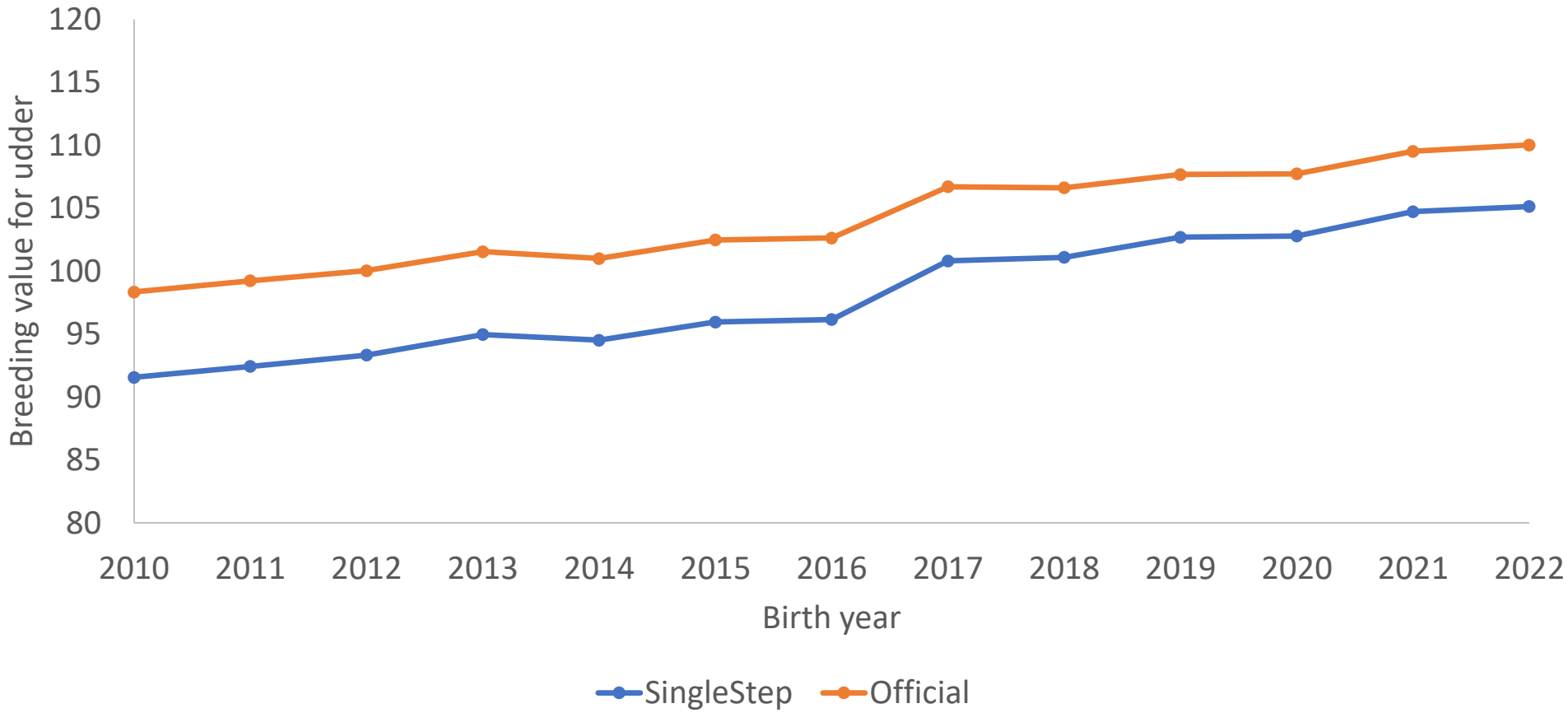
SEGES INNOVATION

RDC genotyped females - udder



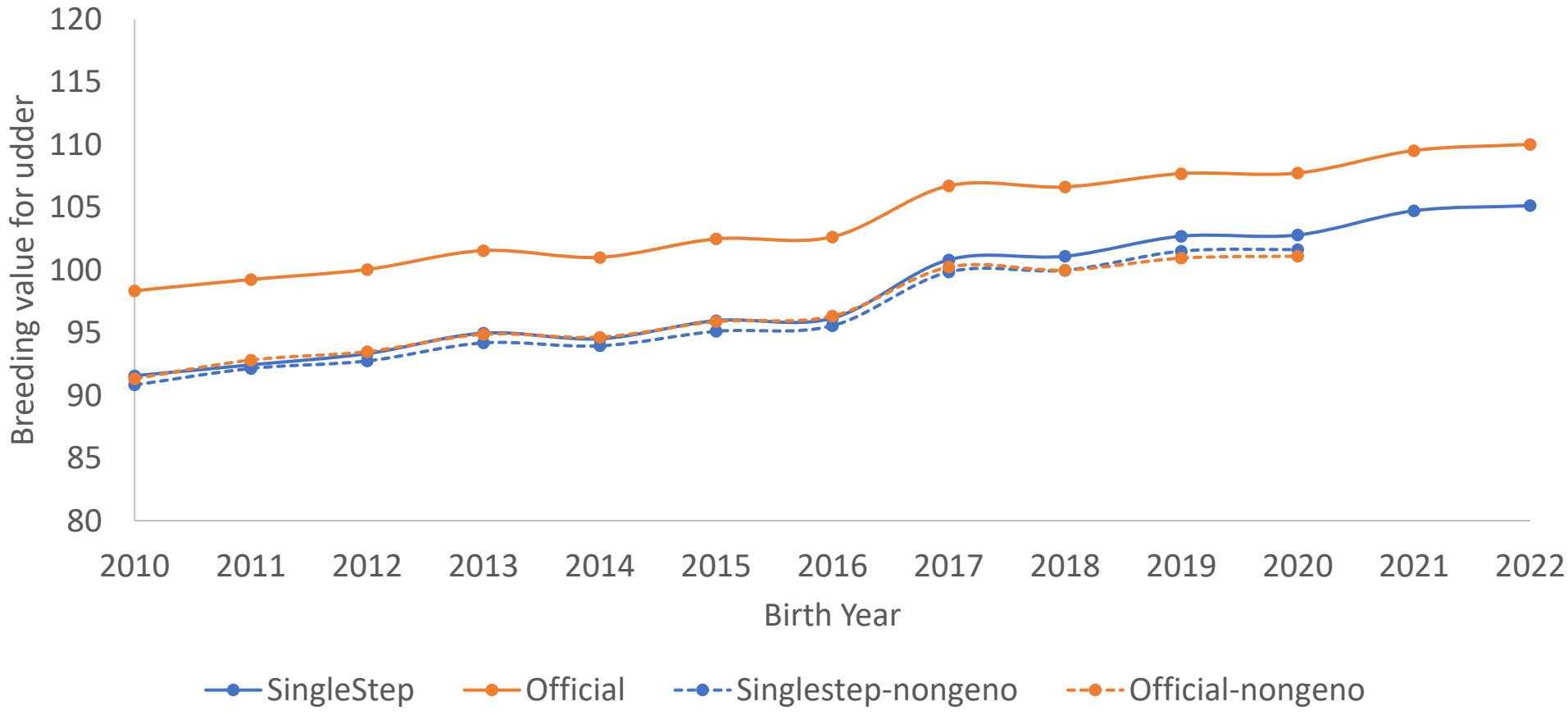
SEGES INNOVATION

JER genotyped females - udder



SEGES INNOVATION

JER genotyped females - udder

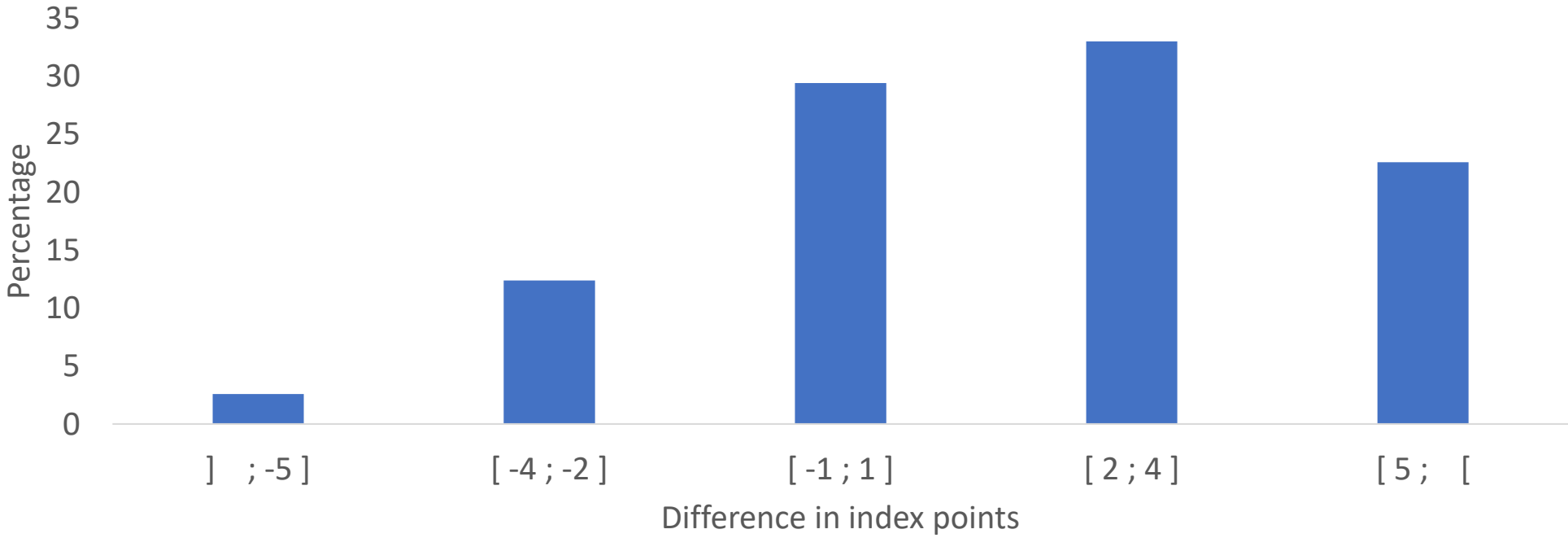


SEGES INNOVATION

HOL genotyped females - udder

Correlations	Birth year	udder
	2010 - 2019	0.93 - 0.94
	2020 - 2022	0.92

Distribution of differences for females born >=2020

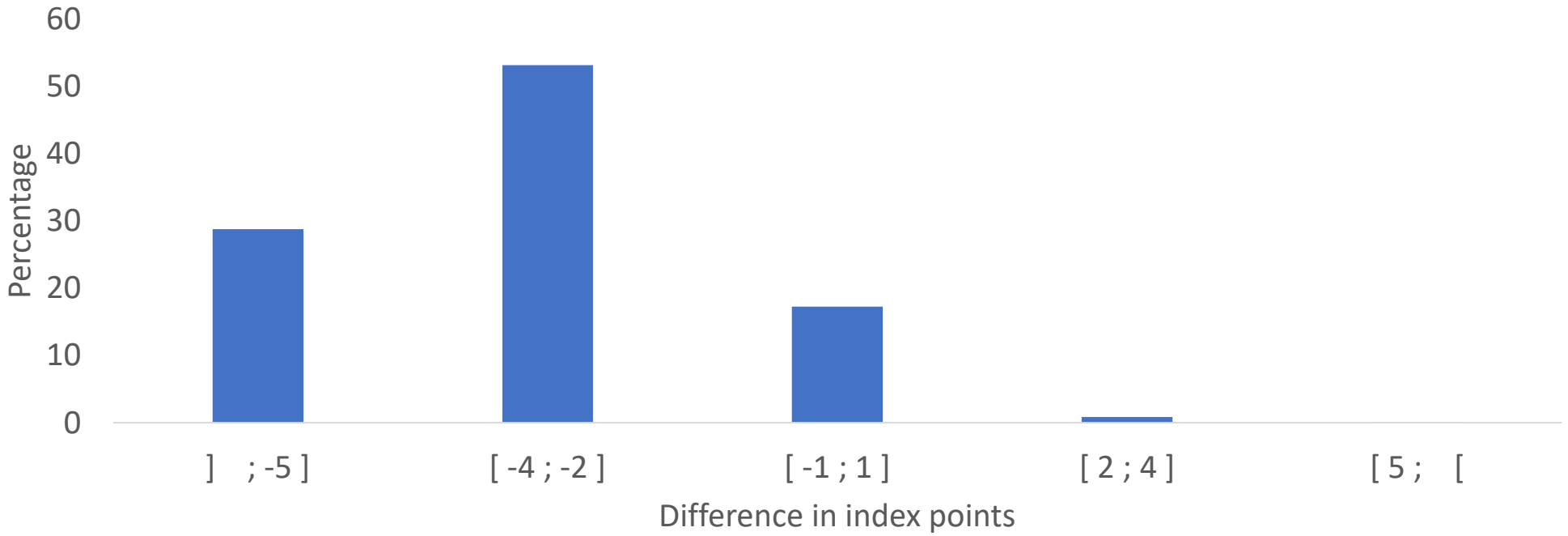


SEGES INNOVATION

RDC genotyped females - udder

Correlations	Birth year	udder
	2010 - 2019	0.97 - 0.98
	2020 - 2022	0.95 - 0.96

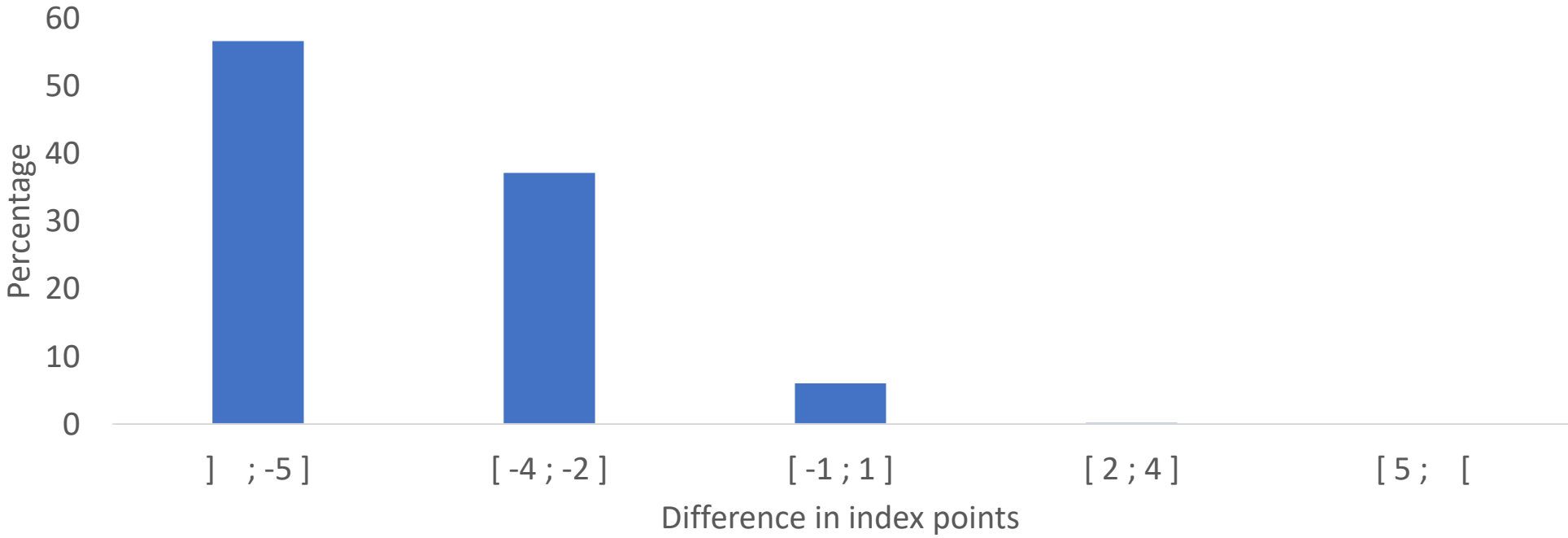
Distribution of differences for females born >=2020



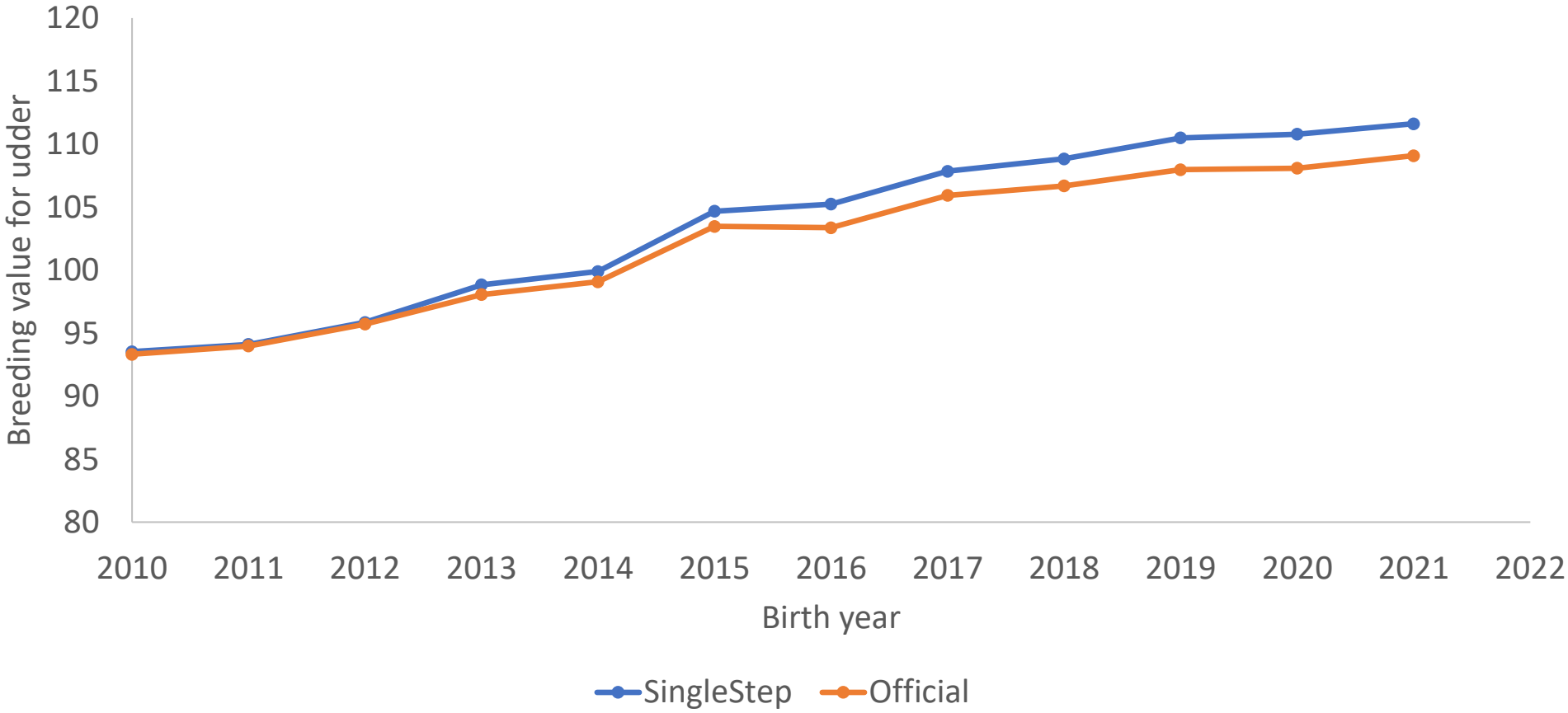
JER genotyped females - udder

Correlations	Birth year	udder
	2010 - 2019	0.97
	2020 - 2022	0.97

Distribution of differences for females born >=2020

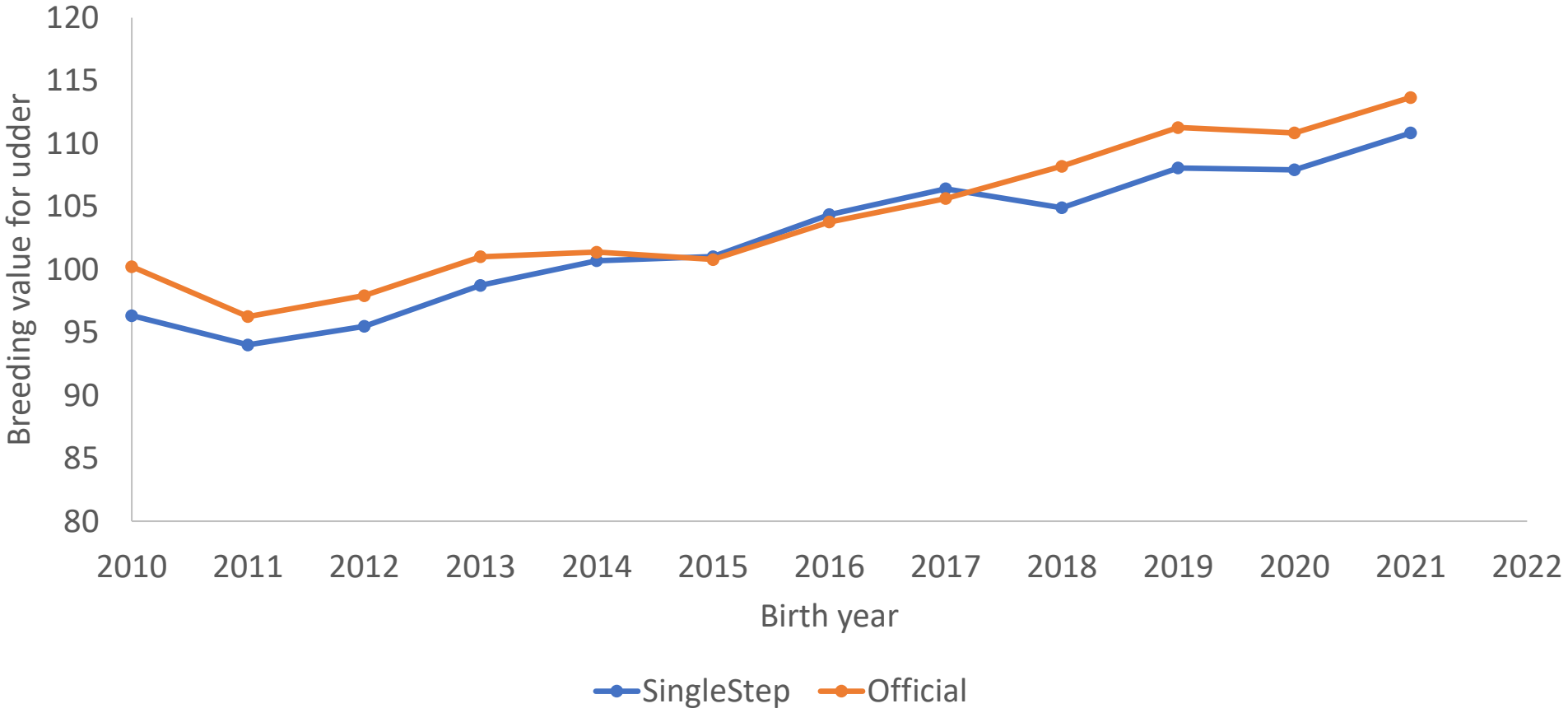


HOL AI bulls - udder



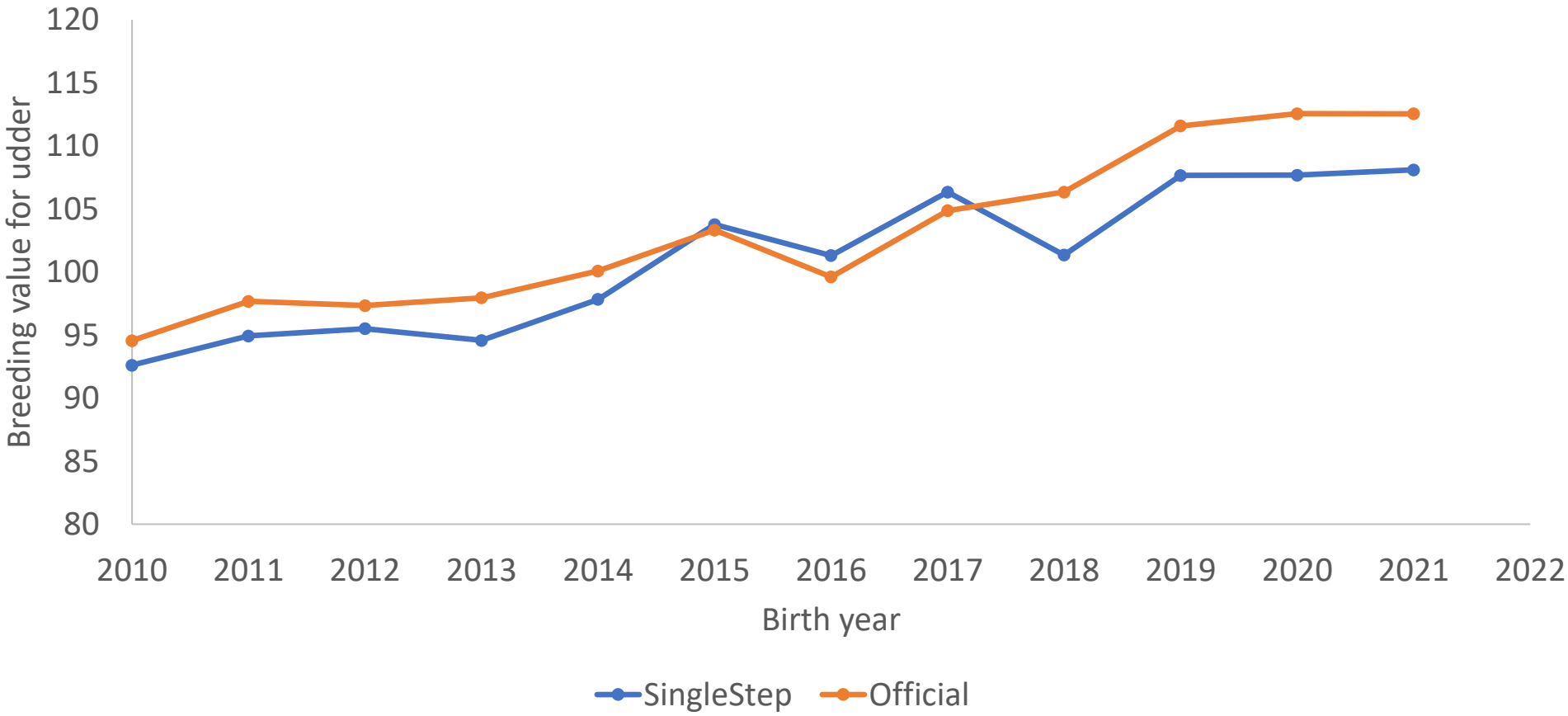
SEGES INNOVATION

RDC AI bulls - udder



SEGES INNOVATION

JER AI bulls - udder

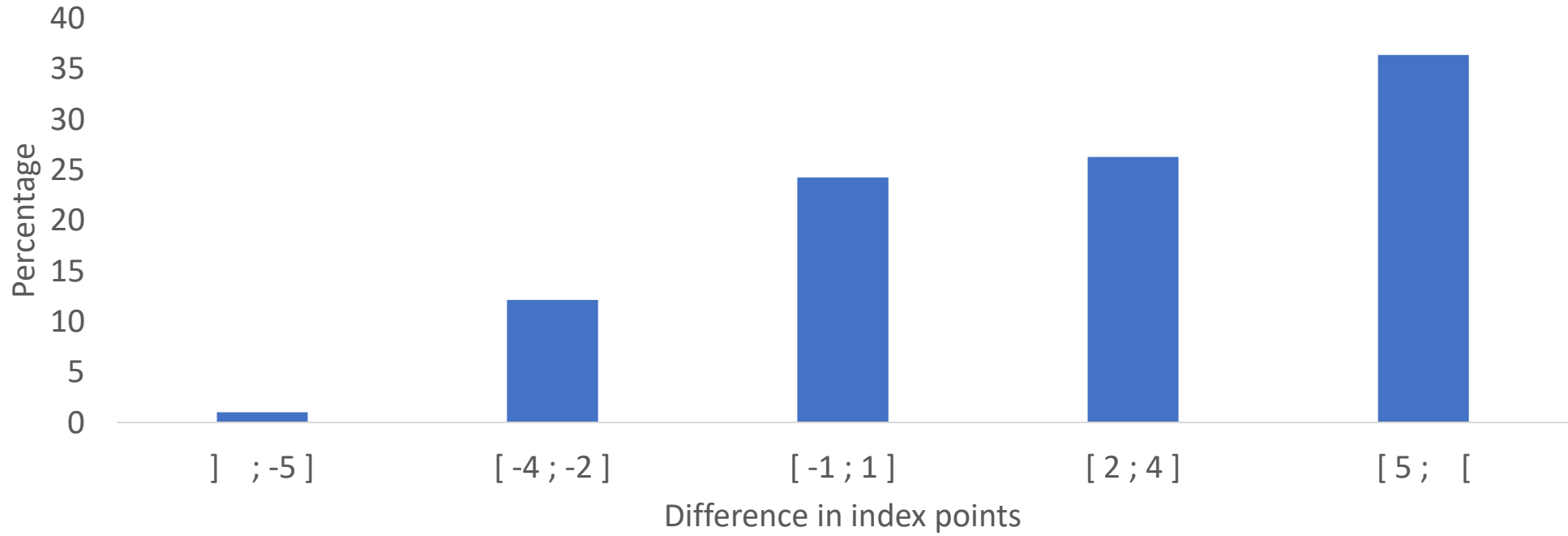


SEGES INNOVATION

HOL AI bulls - udder

Correlations	Birth year	udder
	2010 - 2018	0.93 - 0.97
	2019 - 2022	0.82 - 0.92

Distribution of differences for bulls born >=2020



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RDC AI bulls - udder

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	2010 - 2018	0.91 - 0.97
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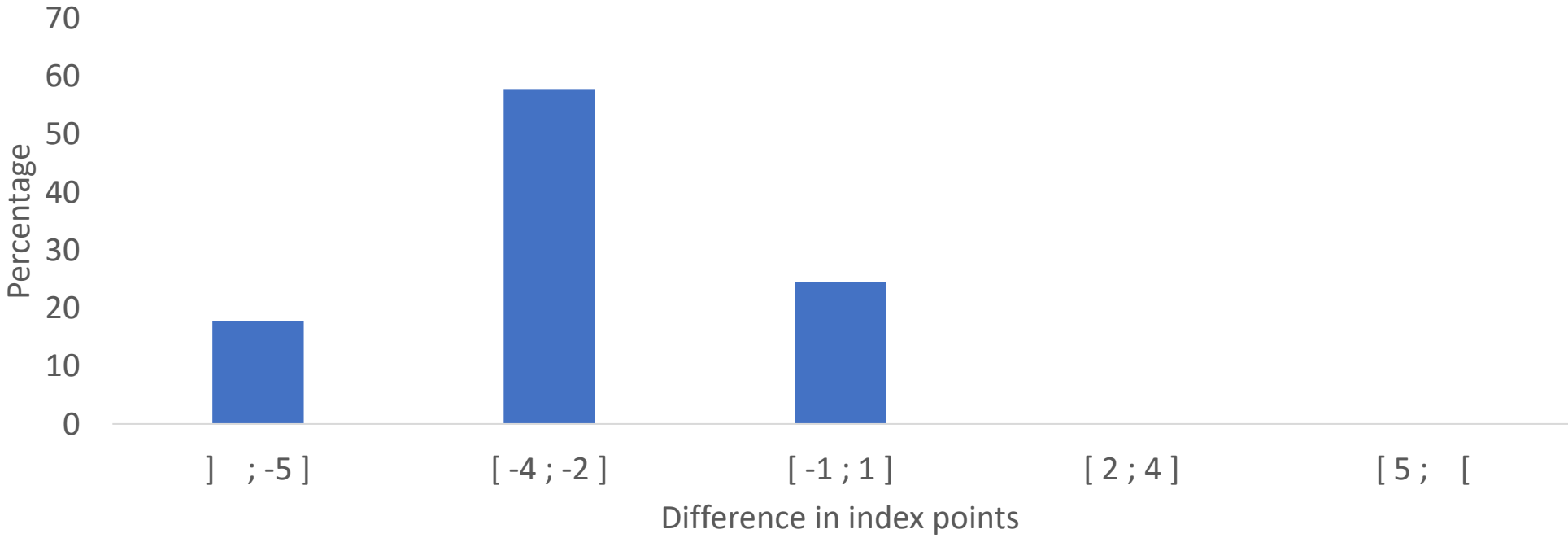
Distribution of differences for bulls born >=2020

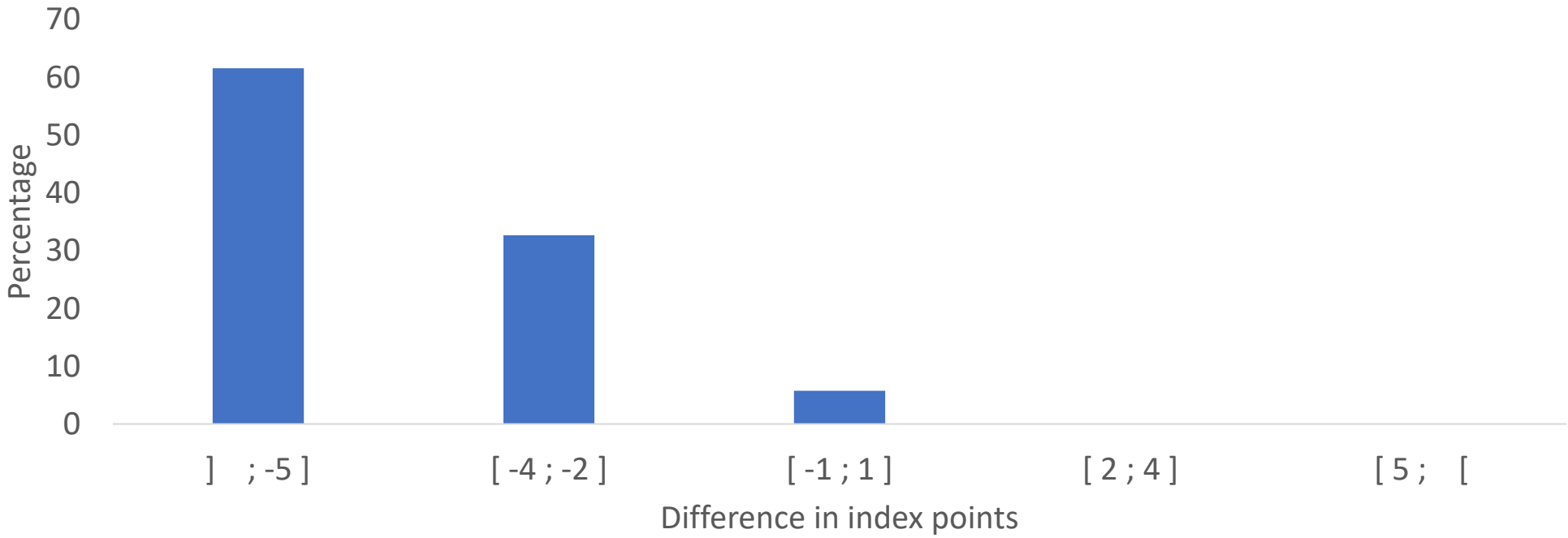


SEGES INNOVATION

JER AI bulls - udder

Correlations	Birth year	udder
	2010 - 2018	0.90 - 0.98
	2019 - 2022	0.96 - 0.97

Distribution of differences for bulls born >=2020



AI bulls - other traits

Similar results for

- Feet and legs
- Frame
- Stature

Before November, all Type traits will be closely studied

SEGES INNOVATION

Conclusions

- For Type traits the singlestep procedure gives promising results
- The trend for genotyped and nongenotyped females are at similar level
- High correlation to current official breeding values
- Work will continue, and hopefully singlestep Type traits will be ready for publication in November 2022

SEGES INNOVATION