

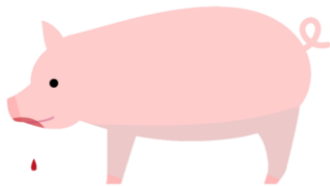
# Can we predict tail biting?

Lisette van der Zande

YES!



## Tail biting behavior



### Performer

- Bites
- No visual indication



### Victim

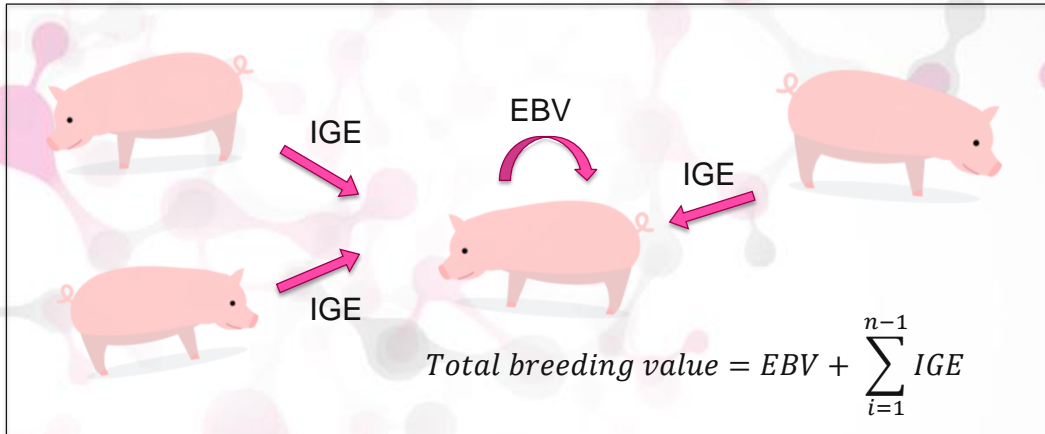
- Receive bites
- Tail damage



### Neutral

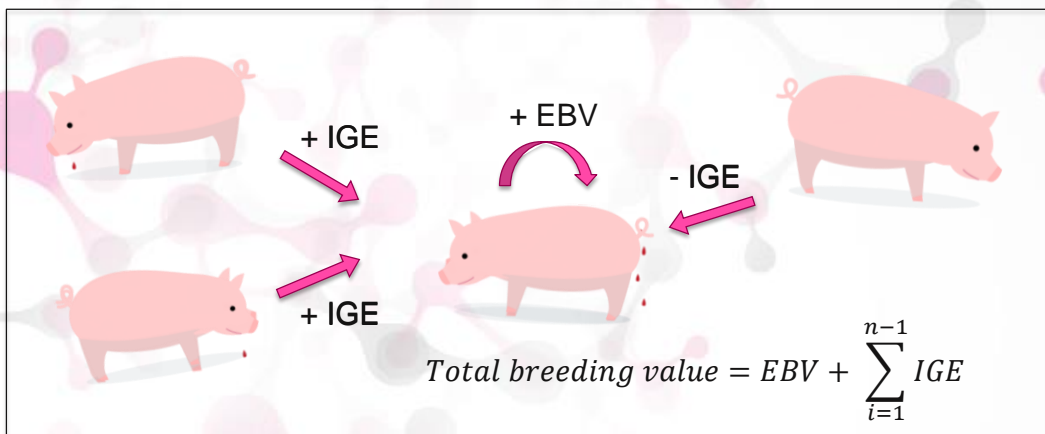
- Doesn't bite
- No tail damage

## Indirect genetic effects



 **Topigs Norsvin**  
PROGRESS IN PIGS

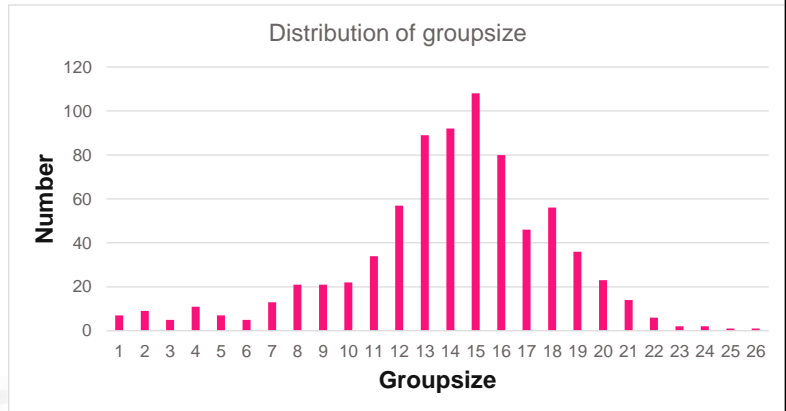
## Example tail DAMAGE



 **Topigs Norsvin**  
PROGRESS IN PIGS

## Dataset

- 10726 individual tail damage records at weaning
- 895 tail damage records during finishing
- 24% is cross-fostered



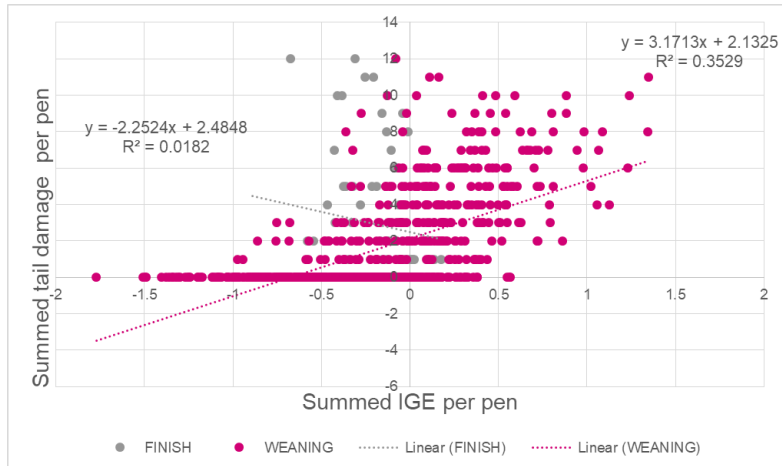
## Genetic Parameters

- Heritability 0.27
- Mostly due to indirect effects

	$\sigma_{TBV}^2$	$\sigma_P^2$	$T^2$
Tail damage	$2.4 \pm 0.9$	$8.8 \pm 1$	$0.27 \pm 0.12$

	Direct	Indirect	Covariance
Contribution to $\sigma_{TBV}^2$ (%)	6	70	24

## Prediction of tail biting pens



## No relation with production

- Small favorable effect of EBV on production
- No effect of IGE

	EBV Tail damage	IGE Tail damage
EBV Index	-0.11	-0.10
EBV Daily Gain	-0.12	-0.05

## Take home message

- Clear definition of your behavior helps your analysis
- Being a performer of tail biting behavior is heritable
- It is possible to predict pens who will have tail damage

# Thank you for your attention!

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