

Breeding Against Boar Taint

The Swiss Approach



Baes, C., Spring, P.
Mattei, S., Sidler, X.
Ampuero, S.
Weingartner, U.
Luther, H., **Hofer***, A.



Swiss College of Agriculture SHL
University of Zurich
Agroscope Liebefeld-Posieux ALP
Coop
SUISAG

Overview

Preface

- A little history
- The genetics of boar taint
- So, what's the problem?

The Swiss approach

- Objectives
- Design
- Preliminary results

Summary

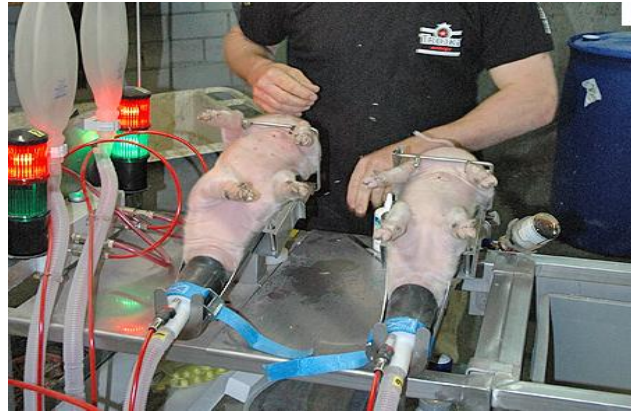
A little history...

...2009



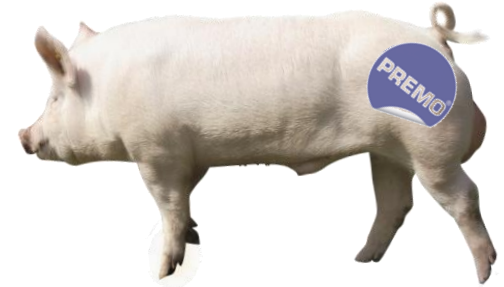
- ☹ animal welfare
- ☹ labour intensive
- ☹ consumer acceptance

...2010...



- ☹ animal welfare
- ☹ labour intensive
- ☹ expensive

...2018



- 😊 most natural

The genetics of boar taint...

Boar taint = Genetics + Environment + Rest

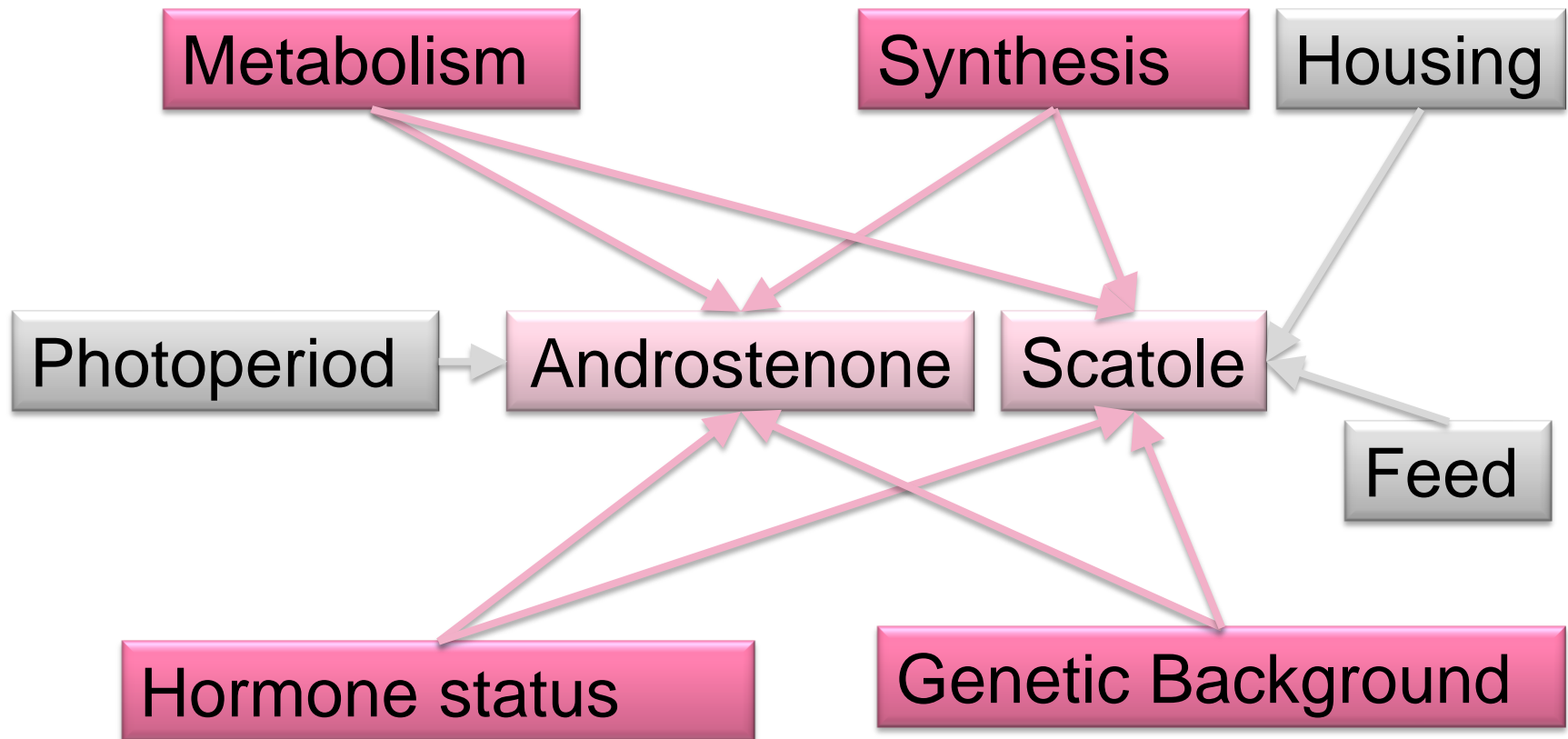
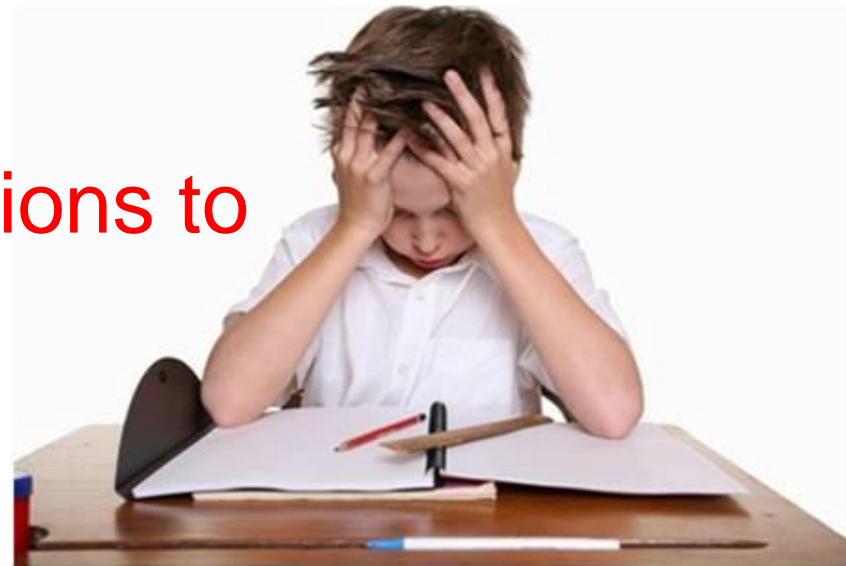


Figure adapted from Lundström, 2005

So, what's the problem?

- 😊 Boar taint is heritable
- 😞 Definition of “boar taint” is inconsistent
- 😞 No common reference (human nose)
- 😞 Breeding takes time
- 😞 Unfavourable correlations to other important traits...?



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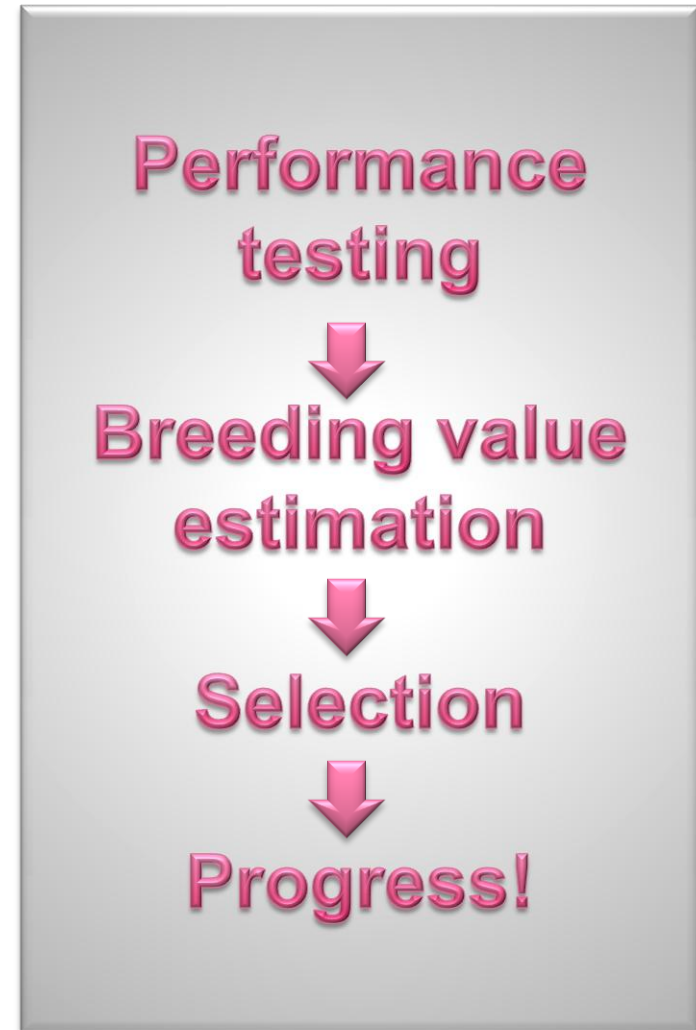
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Objective

Develop a feasible selection strategy against boar taint in the Swiss terminal sire line **PREMO®**



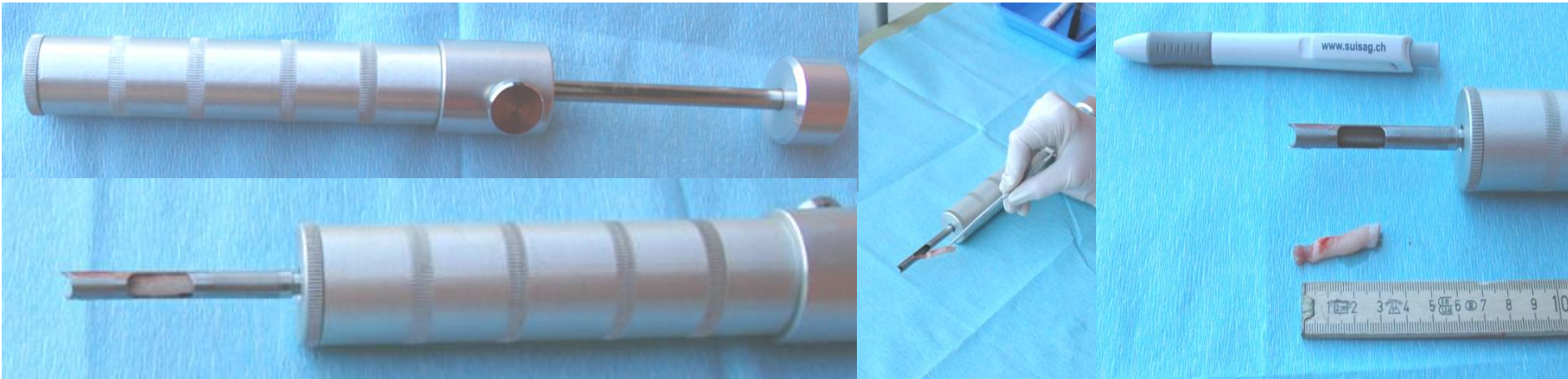
Experimental Design

Develop a feasible selection strategy against boar taint in the Swiss terminal sire line **PREMO®**

- Measurement of boar taint compounds in male breeding candidates (performance test)
- Screen AI boars and test finishing pigs
- Develop breeding value estimation and selection programme

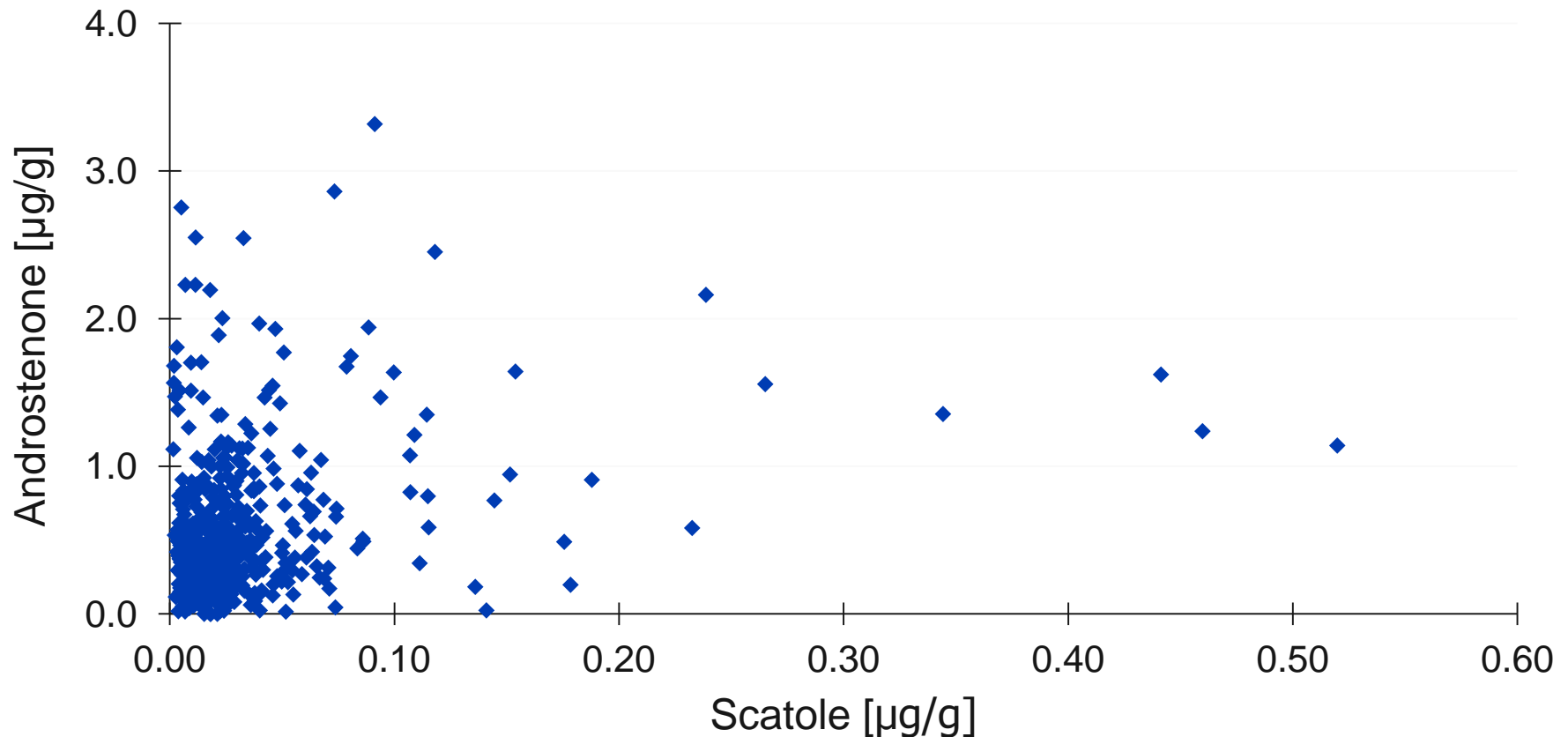


- Measurement of boar taint compounds in male breeding candidates (performance test)



- Measurement of boar taint compounds in male breeding candidates (performance test)

N= 488 samples (399 boars)
100 – 125 kg live weight



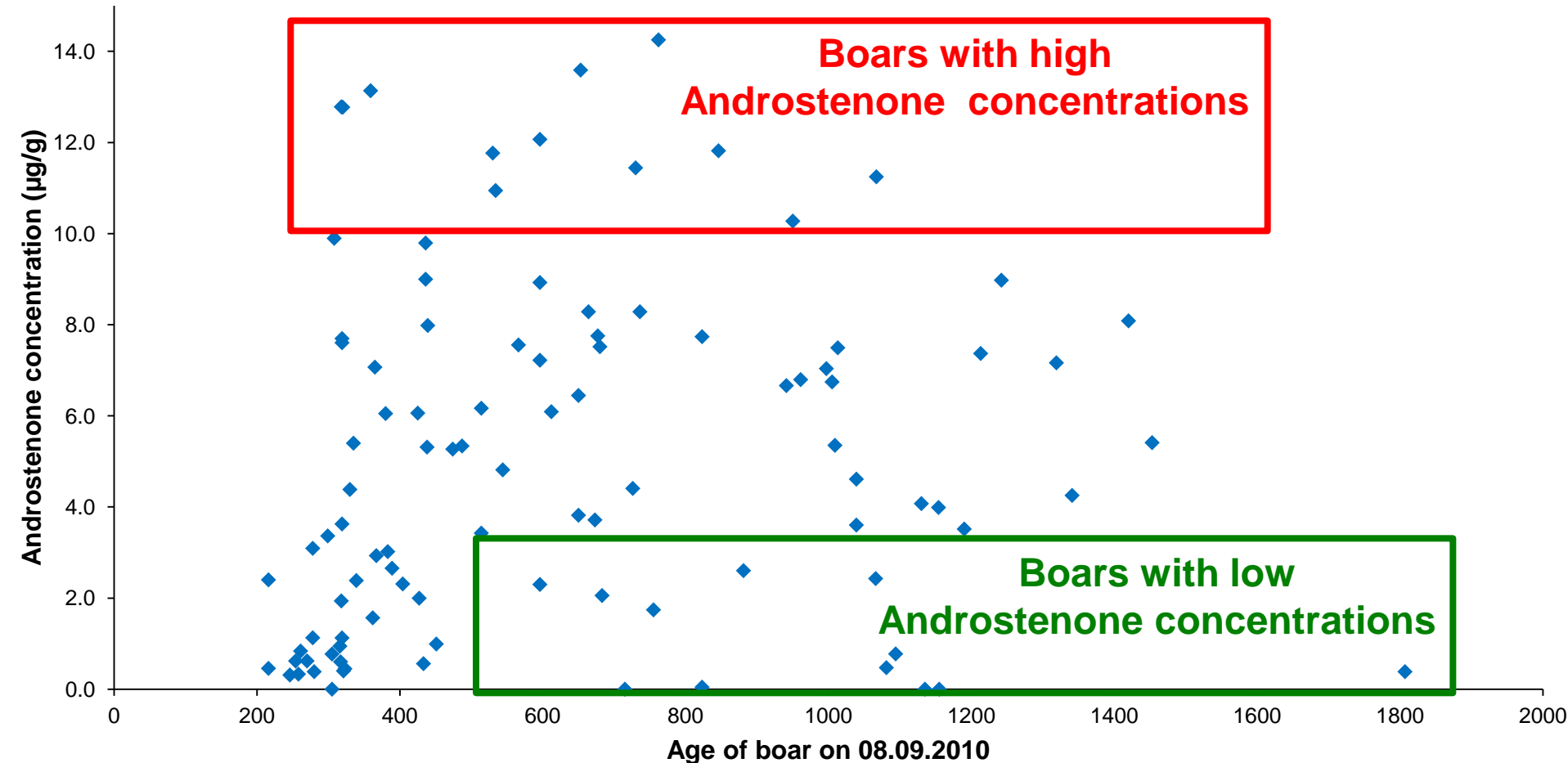
- Measurement of boar taint compounds in male breeding candidates (performance test)

	Ln (A)	Ln (S)	Ln (I)
ln (Androstenon)	0.48	0.12	0.32
ln (Skatol)		0.52	0.92
ln (Indol)			0.55



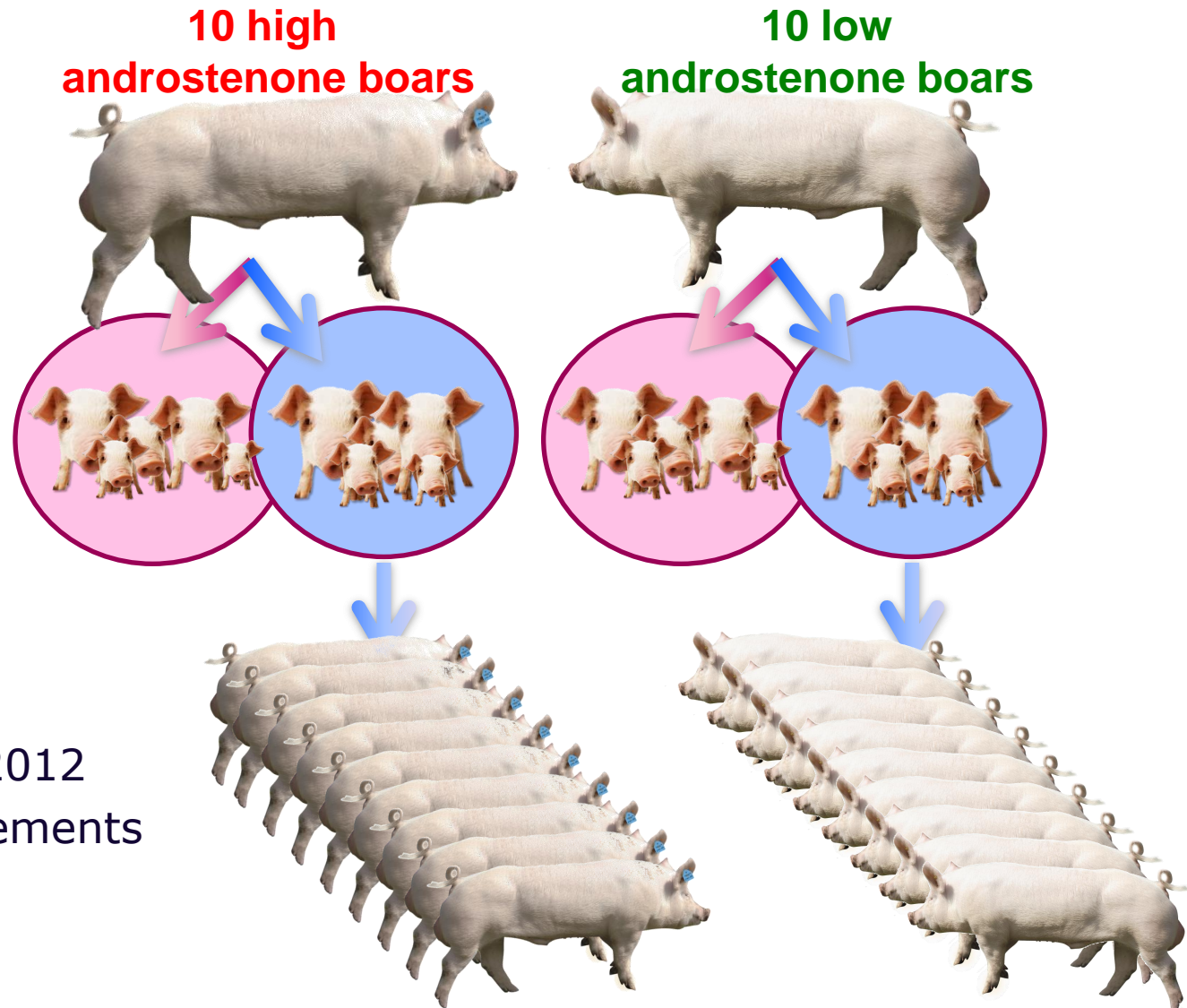
- Screen AI boars and test finishing pigs

Androstenone concentration vs. age



- Screen AI boars and test finishing pigs

- ➔ 69 sows
- ➔ 2 farms
- ➔ 58 litters
- ➔ 322 males
- ➔ Ear tag ID



Intact finishing boars:

- ➔ Sep. 2011 – Jan. 2012
- ➔ Boar taint measurements

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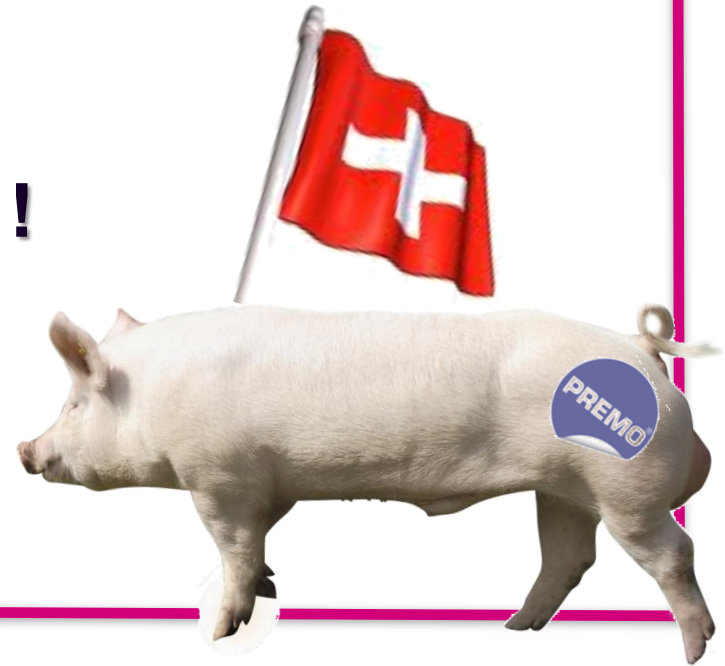
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The Moral of the Story

- A comprehensive genetic analysis of boar taint in the Swiss terminal sire line **PREMO®** is underway
- routine breeding values by SUISAG expected 2012

...breed against boar taint?

...we're working on it !



www.suisag.ch