Reaction norms for litter size in pigs

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PIC

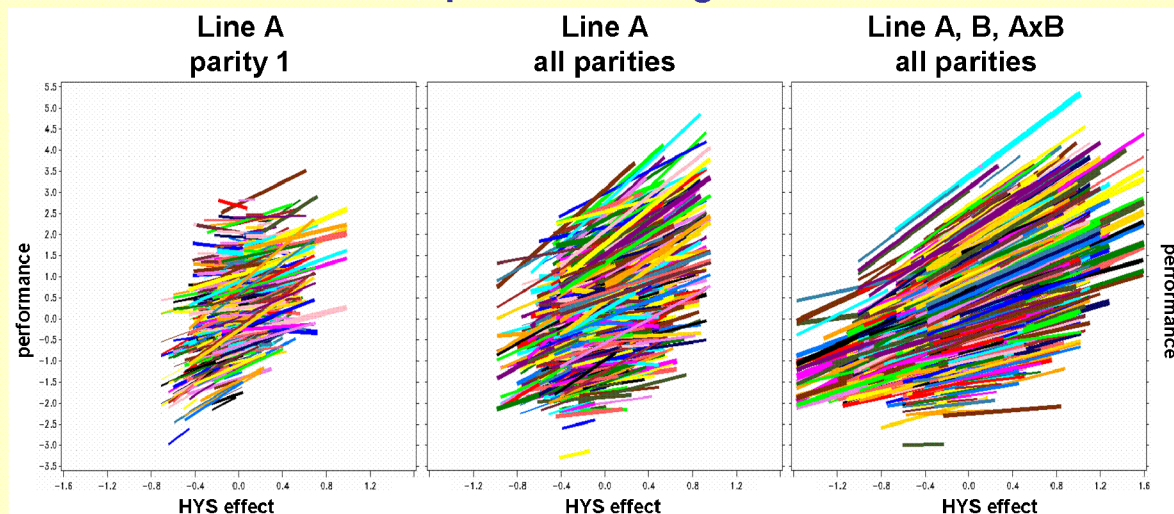346.030 litter size records of 121.104 daughters of 2.040 sires

1754 HYS classes, recorded on 144 farms worldwide →

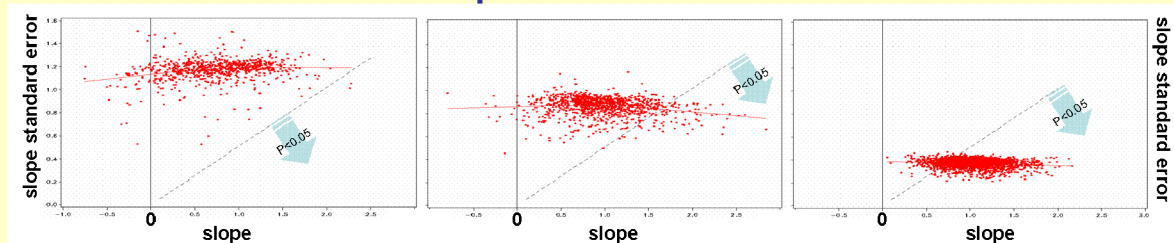Line A, line B, cross AxB – parities 1 to 8

MCMC analysis (Su et al, JAS 2006)**:**
simultaneous estimation of HYS effects and reaction norms

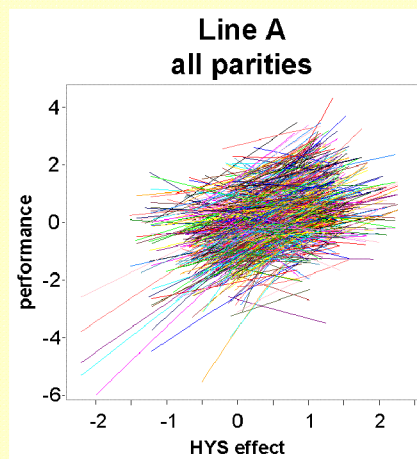## Sire reaction norms: performance against HYS environment

Line A
parity 1

Line A
all parities

Line A, B, AxB
all parities

Sire reaction norms: slope estimates and their standard errors

P<0.05

P<0.05

P<0.05

Sire reaction norms from a simpler analysis

1. **estimate HYS effects: BLUEs from BLUP**

2. **fit reaction norms: random regression with SAS-Mixed**

… not simultaneous

(from Knap, AJEA 2005)

Line A
all parities

Simultaneous estimation of all effects gives much cleaner results
Requires large data volume, good structure, good connectedness
Need to investigate parity effects and purebred-crossbred effects