

- Reason why consider a new trait in breeding program and thereby improving the population for this trait : Long-term goals. ③

Because improvement at the genetic level via breeding (selection mating) happens from generation to the next generation  $\Rightarrow$  Planning horizon generation intervals (Pigs 1.5-2 yrs) (Cattle: 5-7 years)

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- <sup>months to 1 year</sup> Short-term problems usually require management solutions outside of the scope of breeding activities. Work at the farm-level
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2-3 years with genomic selection)

### Selection :

- Selection on phenotypes is inefficient

- Take into account

- phenotype  $y_i = g_i + e_i$  ; because of Central Dogma of molecular Biology
- inheritance between parents and offspring