



**Figure S2- Detail of the analysis set up on the real dataset.** P means phenotype, Pred. P means predicted phenotype and G means genotype,  $A_i$  is the reference population at the generation under scrutiny,  $V$  is the validation population and  $V_{sel}$  is the selected candidates for breeding in the next generation. The green arrows inform on the selection decisions either random or based on best EBVs. The highlighted blocks represent the populations of interest for the analysis.