This is the README file for the folder “ResultsOfBayesianInference”.
This directory contains the following folders.

- BIL.fitting.EBL folder
  This folder contains the results of full data analysis using IM.

- BIL.fitting.EBL1 - 4 folders
  These folders contain the results of full data analysis using IM. These analyses were performed to assess the reproducibility of IM.

- BIL.fitting.Ilog folder
  This folder contains the results of full data analysis using C-Bay.

- BIL.8env.EBL folder
  This folder contains the results of leave-one environment-out cross validation (LOEO) using IM. "8env" indicates that eight environments were used for training.

- BIL.8env.Ilog folder
  This folder contains the results of LOEO using C-Bay.

- BIL.175line.1–35 folders
  These folders contain the results of leave-one line-out cross validation (LOLO) using IM. "175line" indicates that 175 lines were used for training.

- BIL.8env.175line. 1–35 folders
  These folders contain the results of leave-one combination of environments and lines-out cross validation (LOELO) using IM.

Several files were output to these folders by the C program.

- _parameters.txt
  This file contains the parameter values used for the analysis.

- _DH.txt
  This file contains the predicted or fitted values of heading dates. This file is a 176 (number of lines) × (2 × 9 (number of environments)) matrix. The order of the environments is the same as those in the input files (BIL.emergencedate.txt and BIL.headingdate.txt). For each environment, the first column is the posterior mean, and the second column is the posterior standard deviation (SD).

- _sampleda.txt (_sampleb.txt and _sampleg.txt)

  This file contains the MCMC samples of the DVR parameter α (β and G). This file is a 1200 (number of the MCMC samples) × 176 (number of lines) matrix.

- _others.txt

  This file contains some diagnostic information. Both C-Bay and IM output the acceptance rates of the DVR model parameters and the residual variance in the Metropolis updates. C-Bay also outputs the estimates of the means and variances of the prior distributions of the DVR model parameters. IM outputs the residual variances in the regressions of the model parameters on the marker genotypes. C-Bays and IM output the estimate of the residual variance of the DVR model.

- _Loglike.txt

  C-Bays outputs the log likelihood in this file. The log likelihood was calculated from each MCMC sample.

- _coefficient.txt

  IM outputs the regression coefficients of the DVR model parameters on the marker genotypes in this file. This file contains a header, "g gsd a asd b bsd", which denote the posterior mean and SD of G, the posterior mean and SD of α, and the posterior mean and SD of β, respectively. The row under the header is the intercepts. The subsequent rows contain the regression coefficients (i.e., marker effects on the parameters). The markers are ordered as in the KKBIL_geno.txt and KKBIL_geno_map.txt.

"foldenvX" and "foldlineX" in the output file names indicate that the Xth environment and line in the used partition file was excluded from training.