Calib2CSIRO\_results explanation

Please answer the following questions. The objective is to better understand exactly how calibration was done. We are particularly interested in 5 aspects of calibration: choice of parameters (which, how many), fixing lower and upper limits on parameter values or other prior information, how multiple measured variables were handled, the calibration approach (e.g. weighted least squares, Bayes, GLUE etc), calculation of uncertainty in estimated parameters.

1. Name of model. Version number.
2. Contact person, name, affiliation, and email
3. How many parameters did you estimate (i.e. change from initial default values)?
4. Which parameters did you estimate (please give the name and a short explanation and units of each)?
5. Why did you choose those particular parameters to calibrate? Why that number of parameters to estimate (i.e. why not more or fewer parameters)?
6. Which of the measured variables did you use for calibration (e.g. values for days to Zadok65 and Zadok90)?
7. In general, not all the training environments have data for all Zadok stages (e.g. only some environments have measured days after sowing for maturity=Zadok90). How did you take account of different numbers of measurements for different variables?
8. Describe your calibration approach. For example, did you define a criterion to minimize, like  i.e. the total sum of squared errors for days to Zadok65 and for days to Zadok90, where  () is the number of environments with observed values of Zadok65 (Zadok90). The variables specified in response to question 6, and no others, should appear here.
9. Did you set lower and upper limits to the parameter values, or use other prior information about the parameter values? If so, please give the values for each parameter. How did you decide on those limits or that prior distribution?
10. What software did you use to find the values of the parameters?
11. Did you estimate parameter uncertainty? If so, please give the uncertainty values for your parameters (for example, standard deviation for each parameter), and indicate how you estimated the uncertainty.
12. We provided as input variables multiple variables for weather (daily max and min T etc), multiple variables for soil characteristics (e.g. water holding capacity by layer), management (sowing date, irrigation, fertilization) and initial conditions (water, NO3). Did your model require other input variables that weren’t provided with the data? Please list them and give the values you assigned them. (We are interested to see if different groups make different decisions here, which could help explain why different groups running the same model obtain different results).
13. Any other comments