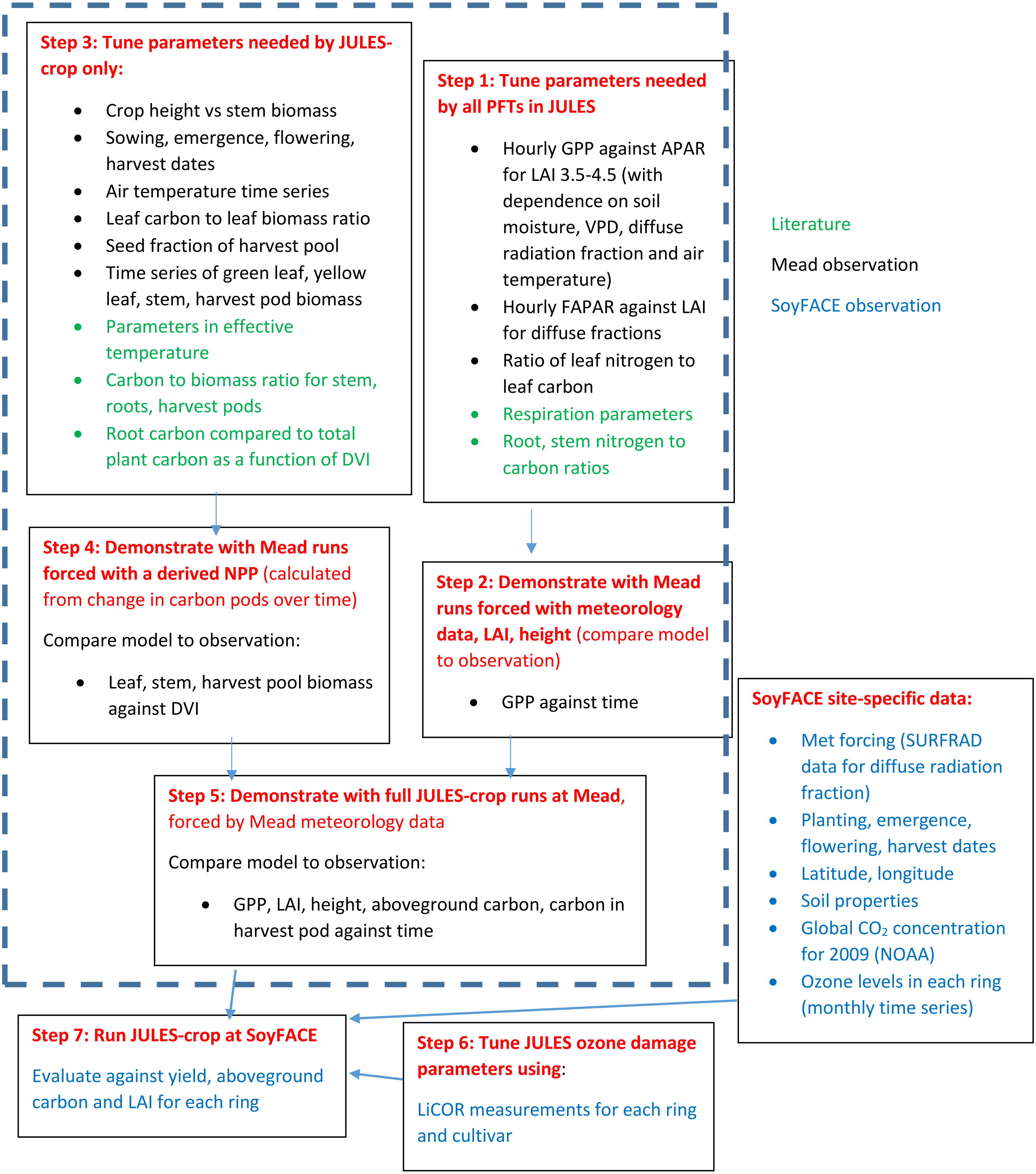
Step 3: Tune parameters needed by JULES-crop only:
Crop height vs stem biomass
Sowing, emergence, flowering, harvest dates
Air temperature time series
Leaf carbon to leaf biomass ratio
Seed fraction of harvest pool
Time series of green leaf, yellow leaf, stem, harvest pod biomass
Parameters in effective temperature
Carbon to biomass ratio for stem, roots, harvest pods
Root carbon compared to total plant carbon as a function of DVI
Step 1: Tune parameters needed by all PFTs in JULES
Hourly GPP against APAR for LAI 3.5-4.5 (with dependence on soil moisture, VPD, diffuse radiation fraction and air temperature)
Hourly FAPAR against LAI for diffuse fractions
Ratio of leaf nitrogen to leaf carbon
Respiration parameters
Root, stem nitrogen to carbon ratios
Literature
Mead observation
SoyFACE observation
Step 4: Demonstrate with Mead runs forced with a derived NPP (calculated from change in carbon pods over time)
Compare model to observation:
Leaf, stem, harvest pool biomass against DVI
Step 2: Demonstrate with Mead runs forced with meteorology data, LAI, height (compare model to observation)
GPP against time
SoyFACE site-specific data:
Met forcing (SURFRAD data for diffuse radiation fraction)
Planting, emergence, flowering, harvest dates
Latitude, longitude
Soil properties
Global CO2 concentration for 2009 (NOAA)
Ozone levels in each ring (monthly time series)
Step 5: Demonstrate with full JULES-crop runs at Mead, forced by Mead meteorology data
Compare model to observation:
GPP, LAI, height, aboveground carbon, carbon in harvest pod against time
Step 7: Run JULES-crop at SoyFACE
Evaluate against yield, aboveground carbon and LAI for each ring
Step 6: Tune JULES ozone damage parameters using:
LiCOR measurements for each ring and cultivar