

# Manual for generating settings and launcher files for CROPMETAPOP

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## 1 General purpose

These scripts are designed to create automatically settings files for the CROP-METAPOP simulation software in order to realize a sensibility analysis of its parameters. It creates a experiment plan to realize anova analysis of 2 factors, the settings files corresponding to this experiment plan, and the launcher files to run both the simulations and the analysis on a cluster that uses condor

## 2 List of the files

- **expPlan.R** Script that generates the experiment plan
- **setGenExpPlanANSel.py** Script that uses the experiment plan (5 parameters) for experiment A (drift + selection) for the non-selected markers
- **setGenExpPlanASel.py** Script that uses the experiment plan (5 parameters) for experiment A (drift + selection) for the selected markers
- **setGenExpPlanBNSel.py** Script that uses the experiment plan (9 parameters) for experiment B (drift + selection + colonisation) for the non-selected markers
- **setGenExpPlanBSel.py** Script that uses the experiment plan (9 parameters) for experiment B (drift + selection + colonisation) for the selected markers
- **setGenExpPlanCNSel.py** Script that uses the experiment plan (9 parameters) for experiment C (drift + selection + migration) for the non-selected markers
- **setGenExpPlanCSel.py** Script that uses the experiment plan (9 parameters) for experiment C (drift + selection + migration) for the selected markers

### 3 Protocol

1. Modify the file **expPlan.R** to the desired number of parameters and levels of parameters depending on the experiment. You can also modify the name of the output file (MyData.csv by default).
2. Launch **expPlan.R** using `Rscript expPlan.R`. It creates the file containing the fractional experiment plan.
3. Launch the python script corresponding to the experiment after modifying the name of the input file containing the experiment plan (MyData.csv) using `python3 setGenExpPlanX*Sel.py` with X the experiment to create.
4. This creates a set of settings files for the CROPMETAPOP model (ending with .SET), along with a file called **launcherX\*Sel** that contains the commands to launch the experiments using `condor_submit`, and a **launcherR** file that contains the corresponding command to launch the analysis using `condor_submit`.