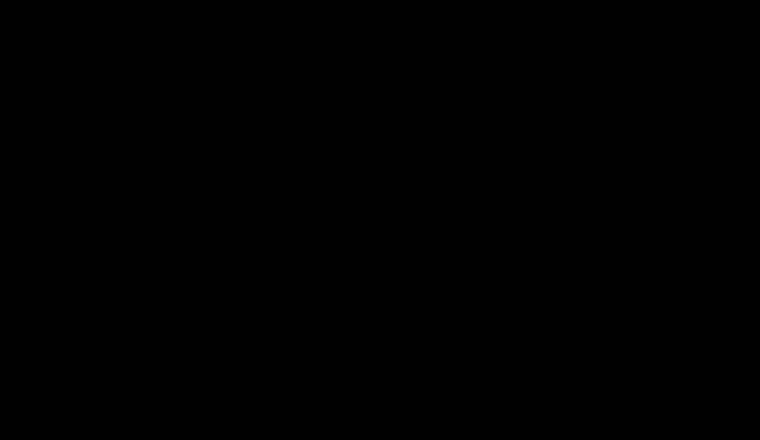
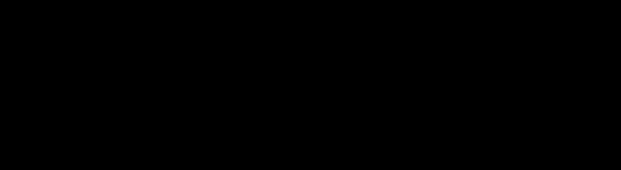
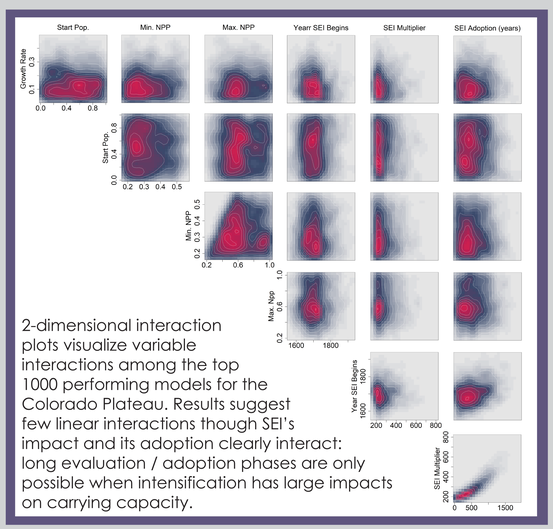


prior and posterior parameter distributions. SEI variables have largest impact.





prior and posterior parameter distributions. SEI variables have largest impact.



2-dimensional interaction plots visualize variable interactions among the top 1000 performing models for the Colorado Plateau. Results suggest few linear interactions though SEI's impact and its adoption clearly interact: long evaluation / adoption phases are only possible when intensification has large impacts on carrying capacity.

Model Evaluation

Each of the 1 million models are evaluated using euclidean distance and weighted euclidean distance matching to each of the 1000 observed SPD reconstructions. Following DiNapoli et al. 2021 each of the 1 million models are reconstruction for matching using calibrated, uncalibrated, normalized, and not normalized methods of generating SPDs from simulated data. Patterns and results are consistent across each of the four reconstruction methods and both of the performance metrics.

KEY TAKEAWAYS

- Results suggest intensification multiplied carrying capacity by ~250 ± 50 in the Plateau and ~140 ± 30 in the Basin
- The ~100 fold gap between regions may indicate differing overall adoption rates or reflect divergence in productivity
- Models suggest intensification takes strong hold around 1700 ± 100 yBP, with the Basin slightly later than the Plateau
- SEI adoption results reinforce the idea the Plateau saw more rapid, and broader, adoption of maize than the Basin
- Climate altering NPP has little effect on the overall dynamic, though divergence points in simulated vs observed patterns may reflect climate influences

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