

3054129 FV, 2021 spring

Project 2 -- Forest Type and Stand Structure

Tools: SigmaPlot, SPSS, or SAS

Forest inventory data: 76 pine-oak stands (stand level, size class level)

Hints: Species composition, diameter size class, Weibull distribution

Questions to be answered:

1. Draw a figure to analyze the stand structure of pine-oak forests in general.
2. Draw figures for the diameter structure of pine-dominated, oak-dominated, and mixed stands.
3. Compare the diameter structure of pine in pine-dominated, oak-dominated, and mixed stands, and try to explain why.
4. Compare the diameter structure of oak in oak-dominated, pine-dominated, and mixed stands, and try to explain why.
5. Write down Weibull distribution equations (2-parameter, 3-parameter, 4-parameter). Fit the curves of diameter structure of previous questions using Weibull distribution, and analyze the advantages of using 3-parameter Weibull distribution in diameter distribution.

Appendix

Forest resource inventory: Simulated data (www.optifor.cn/pdf/Simu_data.pdf)