

Recent Developments in DOE for Agricultural Research

Andy Mauromoustakos¹ and Bradley Jones²

¹Prof AG STAT LAB, U of Arkansas,

²Distinguished Research Fellow, JMP Division/SAS

In this talk we will review some of the restrictions and limitations of the classical textbook designs. We will focus on the popular variations of Split-Plot experiments and in the screening designs. We will then demonstrate advantages of the modern experimental designs reviewing computer-generated designs with different optimality criteria. The examples will demonstrate how using these new tools the AG experimenter can gain valuable insight as to the choice and the possible benefits before conducting the actual research. We will also show examples situations where the newer designs outperform the classical designs by leading to correct answers with vast fewer resources.