

**** BLACK-GRASS CHAPTER ****

The codes for the black-grass chapter are similar to the codes for the default model except that the mixed-integer weighted goal programming model was applied (using the function **solveGoalProg**, **Line 3985**)

The main addition is that to run the model using the FBS data for the 745 farm, their soil type, rainfall, crop yield and crop price (contained in the file **Farms_BG_Exp.csv**) were used. As a result, estimation of gross margin and yield penalties were based on the farm yield data from the FBS data. Workable hours were estimated based on farm soil and rainfall data.

To run the model for each of the selected farms, a new function, **varySpringCrop** (Line 4274 to 4441) was created in which the **solveGoalProg** function was incorporated. The results were generated were store as csv files and the aggregate estimates were done using excel.