OPTIMIZATION 2: LINEAR PROGRAMMING

DESCRIPTION:

This module introduces linear programming and covers multiple methods for solving linear programming problems, including how to use the Microsoft Excel Solver add-in.

Tutorial: 34 slides

Problem Sets

Problem Sets: 4 problem sets; 23 questions

Average Time: New Module – No data

Sample question from problem set:

Course: Faculty Access (All Modules in Alphabetical Order)

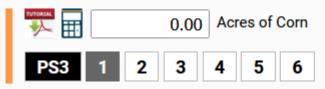
Module: Optimization 2: Linear Programming / Problem Set ID: 11165

Bill and Sue recently inhereted their family farm from their parents and they've decided to continue to manage it together. The farm has 100 acres in total and they have decided that they will grow corn and potato crops on it. To guard against crop failure they've decided to plant a minimum of 25 acres of each crop. They also want to minimize the use of fertilizer and water. Bill declared that they would use no more than 1000 pounds of fertilizer and Sue chimed in that their wells had a maximum capacity of 100,000 gallons per year. From their analysis, they had determined that corn required 15 pounds of fertilizer and 800 gallons of water per year and that potatoes required 8 pounds of fertilizer and 1050 gallons of water per acre. They also had checked local market conditions and they found that the expected revenues of \$1,600 per acre for corn and \$750 per acre for potatoes with a normal yield. Ferilizer costs \$9.08 per pound and water costs \$0.12 per gallon.



Total Questions

If their objective is to maximize revenues from the farm subject to the constraints, how many acres of corn should they plant?



SUBMIT ANSWER

EXIT