GAMS Rev 239 WEX-WEI 23.9.5 x86\_64/MS Windows 02/13/13 23:20:53 Page 1

G e n e r a l A l g e b r a i c M o d e l i n g S y s t e m

C o m p i l a t i o n

1 Variables

2 z total crop revenue ;

3 Positive Variable x1, x2 ;

4

5 Equations

6 land Total Land Constraint

7 labor Total Labor Constraint

8 profit Total profit ;

9

10

11 land .. x1 + x2 =L= 7 ;

12 labor .. 4\*x1 + 10\*x2 =L= 40 ;

13 profit.. z =e= 30\*x1 + 100\*x2;

14

15 Model farmer /all/ ;

16

17 Solve farmer using lp maximizing z ;

COMPILATION TIME = 0.000 SECONDS 2 Mb WEX239-239 Nov 9, 2012

Equation Listing SOLVE farmer Using LP From line 17

---- land =L= Total Land Constraint

land.. x1 + x2 =L= 7 ; (LHS = 0)

---- labor =L= Total Labor Constraint

labor.. 4\*x1 + 10\*x2 =L= 40 ; (LHS = 0)

---- profit =E= Total profit

profit.. z - 30\*x1 - 100\*x2 =E= 0 ; (LHS = 0)

Column Listing SOLVE farmer Using LP From line 17

---- z total crop revenue

z

(.LO, .L, .UP, .M = -INF, 0, +INF, 0)

1 profit

---- x1

x1

(.LO, .L, .UP, .M = 0, 0, +INF, 0)

1 land

4 labor

-30 profit

---- x2

x2

(.LO, .L, .UP, .M = 0, 0, +INF, 0)

1 land

10 labor

-100 profit

Model Statistics SOLVE farmer Using LP From line 17

MODEL STATISTICS

BLOCKS OF EQUATIONS 3 SINGLE EQUATIONS 3

BLOCKS OF VARIABLES 3 SINGLE VARIABLES 3

NON ZERO ELEMENTS 7

GENERATION TIME = 0.016 SECONDS 3 Mb WEX239-239 Nov 9, 2012

EXECUTION TIME = 0.016 SECONDS 3 Mb WEX239-239 Nov 9, 2012

Solution Report SOLVE farmer Using LP From line 17

S O L V E S U M M A R Y

MODEL farmer OBJECTIVE z

TYPE LP DIRECTION MAXIMIZE

SOLVER CPLEX FROM LINE 17

\*\*\*\* SOLVER STATUS 1 Normal Completion

\*\*\*\* MODEL STATUS 1 Optimal

\*\*\*\* OBJECTIVE VALUE 400.0000

RESOURCE USAGE, LIMIT 0.016 1000.000

ITERATION COUNT, LIMIT 1 2000000000

IBM ILOG CPLEX Jul 4, 2012 23.9.5 WEX 36376.36401 WEI x86\_64/MS Windows

Cplex 12.4.0.1

LP status(1): optimal

Optimal solution found.

Objective : 400.000000

LOWER LEVEL UPPER MARGINAL

---- EQU land -INF 4.000 7.000 .

---- EQU labor -INF 40.000 40.000 10.000

---- EQU profit . . . 1.000

land Total Land Constraint

labor Total Labor Constraint

profit Total profit

LOWER LEVEL UPPER MARGINAL

---- VAR z -INF 400.000 +INF .

---- VAR x1 . . +INF -10.000

---- VAR x2 . 4.000 +INF .

z total crop revenue

\*\*\*\* REPORT SUMMARY : 0 NONOPT

0 INFEASIBLE

0 UNBOUNDED

EXECUTION TIME = 0.016 SECONDS 2 Mb WEX239-239 Nov 9, 2012

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\*\*\*\* FILE SUMMARY

Input \\prism.nas.gatech.edu\rpowers7\vlab\Documents\gamsdir\projdir\Untitl

ed\_2.gms

Output \\prism.nas.gatech.edu\rpowers7\vlab\Documents\gamsdir\projdir\Untitl

ed\_2.lst