\*EXP.DETAILS: UINT1401MZ MAIZE IL, N Tracking

\*GENERAL

@PEOPLE

Format: 1 C 75

Yigang Sun AND Junming Wang

@ADDRESS

Format: 1 C 75

Illinois State Water Survey, University of Illinois, Champaign

@SITE

Champaign, IL 40.084N; 88.240W;219M; CTUSA

Format: 1 C 75

@ PAREA PRNO PLEN PLDR PLSP PLAY HAREA HRNO HLEN HARM.........

-99 -99 -99 -99 -99 -99 -99 -99 -99 -99

@NOTES

Format: 1 C 75

The purpose of this experiment was to collect baseline data to test CERES Maize in Iowa. Two plant populations (4.7 and 7.5 plants/m2) and two nitrogen rates ((56 and 224 kg N/ha) were established in a randomized complete block design. Various biomass data were collected during the season and are recorded in the associated fileT.

\*TREATMENTS -------------FACTOR LEVELS------------

@N R O C TNAME.................... CU FL SA IC MP MI MF MR MC MT ME MH SM

1 1 0 0 N=56 KG/HA POP=4.7 PL/M2 1 1 0 1 1 0 1 0 0 0 0 1 1

2 1 0 0 N=224 KG/HA POP=4.7 PL/M2 1 1 0 1 2 0 2 0 0 0 0 1 1

3 1 0 0 N=56 KG/HA POP=7.5 PL/M2 1 1 0 1 3 0 1 0 0 0 0 1 1

4 1 0 0 N=224 KG/HA POP=7.5 PL/M2 1 1 0 1 4 0 2 0 0 0 0 1 1

\*CULTIVARS

C = cultivar level, 0 I 2

CR = crop code, 1 C 2

INGENO = Cultivar identifier (Institute code + Number), 1 C 6

CNAME = Cultivar name, 1 C 16

@C CR INGENO CNAME

1 MZ UI1052 DK 611

Field history code and duration (no defaults)

L = field level, 0 I 2; ID\_FIELD = Field ID (Institute + Site + Field), 1 C 8

WSTA = Weather station code (Institute+Site), 1 C 8

FLSA = Slope and aspect, degrees from horizontal plus direction (W, NW, etc.), 1 C 5

\*FIELDS

@L ID\_FIELD WSTA.... FLSA FLOB FLDT FLDD FLDS FLST SLTX SLDP ID\_SOIL FLNAME

1 UINT0001 UINT0001 -99 0 DR000 0 0 00000 -99 110 UINT0001 -99

@L ...........XCRD ...........YCRD .....ELEV .............AREA .SLEN .FLWR .SLAS FLHST FHDUR

FLOB = Obstruction to sun, degrees, 1 R 5 0 FLDT = Drainage type, code, 1 C 5

FLDD = drain depth, cm, 1 R 5 0 FLDS = Drain spacing, m, 1 R 5 0

FLST = Surface stones (Abundance,%+Size, S, M, L), 1 C 5

SLTX = Soil texture, 1 C 5 SLDP = Soil depth, cm, 1 R 5 0

1 -99 -99 -99 -99 -99 -99 -99 -99 -99

Seems latitude, longitude and elevation

\*INITIAL CONDITIONS

@C PCR ICDAT ICRT ICND ICRN ICRE ICWD ICRES ICREN ICREP ICRIP ICRID ICNAME

1 MZ 14115 200 0 1 1 -99 -99 -99 -99 -99 -99 -99

C = initial condition level, 0 I 2 PCR = Previous crop code, 1 C5

ICDAT = Initial conditions measurement date, year + days, 1 I 5

ICRT = Root weight from previous crop, kg ha-1, 1 R 5 0

ICND = Nodule weight from previous crop, kg ha-1, 1 R 5 0

ICRN = Rhizobia number, 0 to 1 scale (default = 1), 1 R 5 2

ICRE = Rhizobia effectiveness, 0 to 1 scale (default = 1), 1 R 5 2

@C ICBL SH2O SNH4 SNO3

1 15 .189 0 1

1 20 .189 0 .5

1 50 .228 0 0

1 71 .31 0 0

ICBL : DLAYRI(L) = Depth, base of layer, cm, 1 R 5 0

SH2O = Water, cm3 cm-3 x 100 volume percent (decimal?), 1 R 5 3

SNH4 = Ammonium, KCl, g elemental N Mg-1 soil, 1 R 5

SNO3 = Nitrate, KCl, g elemental N Mg-1 soil, 1 R 5 1

1 100 .32 0 0

1 126 .28 0 0

1 151 .28 0 0

! 1 MZ 14124 200 0 1.00 1.00

\*PLANTING DETAILS

@P PDATE EDATE PPOP PPOE PLME PLDS PLRS PLRD PLDP PLWT PAGE PENV PLPH SPRL PLNAME

1 14147 -99 5 4.7 S R 76 0 4 -99 -99 -99 -99 -99 -99

2 14147 -99 5 4.8 S R 76 0 4 -99 -99 -99 -99 -99 -99

3 14147 -99 8 7.6 S R 76 0 4 -99 -99 -99 -99 -99 -99

4 14147 -99 8 7.4 S R 76 0 4 -99 -99 -99 -99 -99 -99

( J = Fertilizer application number) F = Fertilizer application level, 0 I 2

FDATE : FDAY(J) = Fertilization date, year + day or days from planting, 1 I 5

FMCD : IFTYPE(J) = Fertilizer material, code, 1 C 5

FACD : FERCOD(J)= Fertilizer application/placement, code, 1 C 5

\*FERTILIZERS (INORGANIC)

@F FDATE FMCD FACD FDEP FAMN FAMP FAMK FAMC FAMO FOCD FERNAME

1 14130 FE004 AP009 20 56 0 0 -99 -99 -99 -99

FDEP : DFERT(J) = Fertilizer incorporation/application depth, cm, 1 R 5 0

FAMN : ANFER(J) = N in applied fertilizer, kg ha-1, 1 R 5 0

FAMP : APFER(J) = P in applied fertilizer, kg ha-1, 1 R 5 0

FAMK : AKFER(J) = K in applied fertilizer, kg ha-1, 1 R 5 0

2 14130 FE004 AP009 20 224 0 0 -99 -99 -99 -99

1 14324 FE005 AP004 20 56 0 0 -99 -99 -99 -99

2 14334 FE005 AP004 20 224 0 0 -99 -99 -99 -99

R = Residue management level, 0 I 2 RDATE:RESDAY(J)= Incorporation date, year + days, 1 I 5

ROCD:RESCOD(J) = Residue material, code, 1 C 5 RAMT:RESIDUE(J) = Residue amount, kg ha-1, 1 R 5 0

RESN:RESN(J)= Residue nitrogen concentration, %, 1 R 5 2

RESP:RESP(J)= Residue phosphorus concentration, %, 1 R 5 2

\*RESIDUES AND ORGANIC FERTILIZER

@R RDATE RCOD RAMT RESN RESP RESK RINP RDEP RMET RENAME

1 14130 -99 -99 -99 -99 -99 -99 -99 -99 -99

RESK :(J) = Residue potassium concentration, %, 1 R 5 2

RINP :(J)= Residue incorporation percentage, %, 1 R 5 0

RDEP : DEPRES(J) = Residue incorporation depth, cm, 1 R 5 0

\*TILLAGE AND ROTATIONS

@T TDATE TIMPL TDEP TNAME

( J = Tillage application number) T = Tillage level, 0 I 2

TDATE :(J) = Tillage date, year + day, 1 I 5

TIMPL :(J) = Tillage implement, code, 1 C 5

TDEP :(J)= Tillage depth, cm, 1 R 5 0

1 02303 -99 -99 -99

\*HARVEST DETAILS

@H HDATE HSTG HCOM HSIZE HPC HBPC HNAME

( J = Harvest number) H = harvest level, 0 I 2

HDATE :(J) = Harvest date, year + day or days from planting, 1 I 5

HSTG :(J) = Harvest stage, 1 C 5; HCOM :(J) = Harvest component, code, 1 C 5

HSIZ :(J)= Harvest size group, code, 1 C 5

1 14304 GS000 -99 -99 -99 -99

\*SIMULATION CONTROLS

@N GENERAL NYERS NREPS START SDATE RSEED SNAME.................... SMODEL

Model name

1 GE 1 1 S 14115 2150 2014, AMES POPxNxHYB CRGR0045

@N OPTIONS WATER NITRO SYMBI PHOSP POTAS DISES CHEM TILL CO2

Y = simulate process;

N = do not simulate process

1 OP Y Y N N N N N Y M

@N METHODS WTHER INCON LIGHT EVAPO INFIL PHOTO HYDRO NSWIT MESOM MESEV MESOL

1 ME M M E R S C R 1 G S 2

WTHER = weather, 5 C 1 : M = Measured data, as recorded

G = Simulated data, stored as \*.WTG files

S = Simulated data (Internal weather generator using monthly inputs)

W = Simulated data (Internal WGEN weather generator)

@N MANAGEMENT PLANT IRRIG FERTI RESID HARVS

1 MA R N R R R

@N OUTPUTS FNAME OVVEW SUMRY FROPT GROUT CAOUT WAOUT NIOUT MIOUT DIOUT VBOSE CHOUT OPOUT

1 OU N Y N 1 Y N Y Y N N Y N N

INCON = Initial Soil Conditions (5 C 1): M = As reported; S = Simulated outputs from previous model run

LIGHT = Light interception (5 C 1): E = Exponential with LAI; H = ‘Hedgerow’ calculations

EVAPO = Evaporation (5 C 1): P = FAO – Penman; R = Ritchie modification of Priestley-Taylor

INFIL = Infiltration (5 C 1): R = Ritchie method incl. mulch (default); S = Soil Conservation Service routines; N = no mulch effects

PHOTO=Photosynthesis (5 C 1): C = Canopy photosynthesis response curve; R = Radiation use efficiency; L = Leaf photosynthesis response curve

HYDRO =

NSWIT =

MESOM = Method for soil N computations (‘G’=Godwin or Ceres-based, ‘P’=Parton or Century-based)

MESEV = soil evap method switch: S =Suleiman-Ritchie method (default); R = Ritchie-Ceres method

MESOL = Soil layer distribution: 1 = Model-specified soil layers; 2 = Modified soil profile (default); 3 = Unmodified soil profile

PLANT = Planting/Transplanting (5 C 1): A = Automatic when conditions satisfactory; R = On reported date

IRRIG = Irrigation and Water Management: A = Automatic when required; N = Not irrigated; F = Automatic with fixed amounts at each irrigation date; R = On reported dates; D = As reported, in days after planting

FERTI = Fertilization: A = Automatic when required; N = Not fertilized; F = Automatic with fixed amounts at each fertilization date;

R = On reported dates; D = As reported, in days after planting

RESID = Residue applications: A = Automatic for multiple years/crop sequences; N = No applications; F = Automatic with fixed amounts at each residue application date; R = On reported dates; D = As reported, in days after planting

HARVS = Harvest: A = Automatic when conditions satisfactory; G = At reported growth stage(s); M = At maturity; R = On reported date(s); D = On reported days after planting

FNAME = Experiment (Y = yes, files named with the experiment code; N = no), 5 C 1

OVVEW = General Overview (Y = yes, new; A = append; N = no); SUMRY = General Summary (Y = yes, new; A = append; N = no)

Details - individual aspects: FROPT = Frequency of output (days), 4 I 2; GROUT = Growth (Y /N), 5 C 1; CAOUT = Carbon (Y/N);

WAOUT = Water (Y/N); NIOUT = Nitrogen (Y/N); MIOUT = Phosphorous (Y/N); DIOUT = Diseases and other pests (Y/N);

~~LONG = Wide (Y) or 80-column (N) daily outputs, 5 C 1~~ ??

VBOSE =Verbose switch: 0=Only Summary.OUT; N=Minimal output; Y=Normal output(default); D=Detailed output; A=All outputs

***EXAMPLE FILEX FOR A MAIZE IRRIGATION AND NITROGEN LEVEL EXPERIMENT. THE FILE NAME FOR STORING THIS EXPERIMENT INFORMATION WOULD BE UFGA8102.MZX.***

\*EXP.DETAILS: UFGA8102MZ MAIZE EXPERIMENT, IRR. AND NITROGEN (EXAMPLE4)

\*GENERAL

@PEOPLE

DR. K. J. BOOTE

@ADDRESS

DEPARTMENT OF AGRONOMY, UNIV. OF FLORIDA, GAINESVILLE

@SITE

IRRIGATION PARK,GAINESVILLE,FLORIDA 29.63N;82.37W;40M;SE-USA

@ PAREA PRNO PLEN PLDR PLSP PLAY HAREA HRNO HLEN HARM...........

60.0 6 10.0 0 100 N-S 20.0 10 2.0 Hand harvest

@NOTES

This is a maize irrigation experiment, conducted at Gainesville, Florida,

using the variety Pioneer 304C with 4 treatments :

2 irrigation levels and 2 planting dates

\*TREATMENTS -------------FACTOR LEVELS------------

@N R O C TNAME.................... CU FL SA IC MP MI MF MR MC MT ME MH SM

1 1 0 0 IRRIG, 0 N 1 1 0 1 1 1 0 1 0 0 0 0 1

2 1 0 0 NON-IRRIG, 0 N 1 1 0 1 1 0 0 1 0 0 0 0 1

3 1 0 0 IRRIG, 50 KG/HA N 1 1 0 1 1 1 1 1 0 0 0 0 1

4 1 0 0 NON-IRRIG, 50 KG/HA 1 1 0 1 1 0 1 1 0 0 0 0 1

5 1 0 0 IRRIG, 100 KG/HA 1 1 0 1 1 1 2 1 0 0 0 0 1

6 1 0 0 NON-IRRIG, 100 KG/HA 1 1 0 1 1 0 2 1 0 0 0 0 1

\*CULTIVARS

@C CR INGENO CNAME

1 MZ UF0001 PI304C

\*FIELDS

@L ID\_FIELD WSTA.... FLSA FLOB FLDT FLDD FLDS FLST SLTX SLDP ID\_SOIL

1 UFGA0001 UFGA 90-N 0 DR001 0 0 0 LOSA 180 UFGA7701

\*INITIAL CONDITIONS

@C PCR ICDAT ICRT ICND ICRN ICRE

1 SB 81177 100 0 1.00 1.00

@C ICBL SH2O SNH4 SNO3

1 5 0.086 0.6 1.5

1 15 0.086 0.6 1.5

1 30 0.086 0.6 1.5

1 45 0.086 0.6 1.5

1 60 0.086 0.6 1.5

1 90 0.076 0.6 0.6

1 120 0.076 0.6 0.5

1 150 0.130 0.6 0.5

1 180 0.258 0.6 0.5

\*PLANTING DETAILS

@P PDATE EDATE PPOP PPOE PLME PLDS PLRS PLRD PLDP PLWT PAGE PENV PLPH

1 81177 9.5 9.5 S R 100 0 4.0 -99 -99 -99.0 -99.0

\*IRRIGATION AND WATER MANAGEMENT

@I IEFF IDEP ITHR IEPT IOFF IAME IAMT

1 1.00 30 50 100 IB001 IB001 15

@I IDATE IROP IRVAL

1 81204 IR001 19

1 81211 IR001 20

1 81227 IR001 20

1 81239 IR001 20

1 81249 IR001 20

\*FERTILIZERS (INORGANIC)

@F FDATE FMCD FACD FDEP FAMN FAMP FAMK FAMC FAMO FOCD

1 81177 FEO05 APO01 10 50 0 0 0 0 0

2 81177 FEO05 APO01 10 100 0 0 0 0 0

\*RESIDUES AND OTHER ORGANIC MATERIALS

@R RDATE RCOD RAMT RESN RESP RESK RINP RDEP

1 81177 RE001 1000 0.80 0.00 0.00 100 15

\*SIMULATION CONTROLS

@N GENERAL NYERS NREPS START SDATE RSEED SNAME....................

1 1 1 S 81177 2150 MAIZE-IRRIG & NITROGEN

@N OPTIONS WATER NITRO SYMBI PHOSP POTAS DISES

1 Y Y N N N N

@N METHODS WTHER INCON LIGHT EVAPO INFIL PHOTO

1 M M E R S C

@N MANAGEMENT PLANT IRRIG FERTI RESID HARVS

1 R R R R M

@N OUTPUTS FNAME OVVEW SUMRY FROPT GROUT CAOUT WAOUT NIOUT MIOUT DIOUT LONG

1 N Y Y 3 Y Y Y Y N N N

@ AUTOMATIC MANAGEMENT

@N PLANTING PFRST PLAST PH2OL PH2OU PH2OD PSTMX PSTMN

1 155 200 40 100 30 40 10

@N IRRIGATION IMDEP ITHRL ITHRU IROFF IMETH IRAMT IREFF

1 30 50 100 GS000 IR001 10 1.00

@N NITROGEN NMDEP NMTHR NAMNT NCODE NAOFF

1 30 50 25 FE001 GS000

@N RESIDUES RIPCN RTIME RIDEP

1 100 1 20

@N HARVEST HFRST HLAST HPCNP HPCNR

1 0 365 100 0