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Appendix A
PRZM 3 Scenario Parameters

Table A-1. PRZM 2 climate and time parameters for a corn field in Macoupin County, Illinois.

Parameter	Value	Source	Quality
Starting Date*	January 1, 1948		
Ending Date*	December 31, 1983		
Pan Evaporation Factor (PFAC)	0.740	PIC	good
Snowmelt Factor (SFAC)	0.30 cm · K^{-1}	PIC	good
Minimum Depth of Evaporation (ANETD)	16.0 cm	PIC	good
Average Duration of Runoff Hydrograph (TR)	5.80 h	PIC	good

* These values are in the RUN file rather than the INP file.

Table A-2. PRZM 3 model state flags for a corn field in Macoupin County, Illinois.

Parameter	Value
Erosion Flag (ERFLAG)	4 (MUSS)
Pan Factor Flag (IPEIND)	0
Foliar Application Model Flag (FAM)	1
Bulk Density Flag (BDFLAG)	0
Water Content Flag (THFLAG)	0
Kd Flag (KDFLAG)	0
Drainage model flag (HSWZT)	0
Method of characteristics flag (MOC)	0
Irrigation Flag (IRFLAG)	0
Soil Temperature Flag (ITFLAG)	0
Thermal Conductivity Flag (IDFLAG)	0
Biodegradation Flag (BIOFLAG)	0
Partition Coefficient Model (PCMC)	NA
Initial Pesticide Concentration Flag (ILP)	0

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Table A-3. Erosion and landscape parameters for a corn field in Macoupin County, Illinois.			
Parameter	Value	Source	Quality
USLE K Factor (USLEK)	0.42 tons EI^{-1*}	PIC	good
USLE LS Factor (USLELS)	1.0	PIC	fair
USLE P Factor (USLEP)	1.0	PIC	fair
Field Area (AFIELD)	10 ha	standard	
Location of NRCS 24-hour hyetograph (IREG)	3	???	???
Land Slope (SLP)	3.0	???	???
Hydraulic Length (HLP)	464	???	???
* EI = 100 ft-tons * in/ acre*hr			

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Table A-4. PRZM 3 crop parameters for a corn field in Macoupin County, Illinois.

Parameter	Value			Source	Quality
Initial Crop (INICRP)	1				
Initial Surface Condition (ISCOND)	1 (fallow)				
Number of Different Crops (NDC)	3				
Number of Cropping Periods (NCPDS)	36				
Parameters For First Crop (ICNCN = 1)					
Maximum rainfall interception storage of crop (CINTCP)	0.25 cm			PIC	fair
Maximum Active Root Depth (AMAXDR)	90 cm			PIC	fair
Maximum Canopy Coverage (COVMAX)	100%			PIC	fair
Soil Surface Condition After Harvest (ICNAH)	3 (residue)			PIC	
Date of Crop Emergence (EMD, EMM, IRYEM)	May 16			PIC	good
Date of Crop Maturity (MAD, MAM, IYRMAT)	September 16			PIC	good
Date of Crop Harvest (HAD, HAM,IYRHAR)	October 1, 1983			PIC	good
Maximum Dry Weight	0 kg m^{-2}				
Maximum canopy height (HTMAX)	300 cm				fair
Number of USLE C Factor Values (NUSLEC)	3				
(C Factor and Manning's N sychronized with crop dates	Fallow	Cropped	Residue		
SCS Curve Number (CN)	86	78	82	measurement	good
USLE C Factor (USLEC)	0.50	0.50	0.50	PIC	fair
Mannings n (MNGN)	.04	.04	.04	???	fair
Parameters For Second Crop (ICNCN = 2)					
Maximum rainfall interception storage of crop (CINTCP)	0.25 cm			PIC	fair
Maximum Active Root Depth (AMAXDR)	90 cm			PIC	fair
Maximum Canopy Coverage (COVMAX)	100%				
Soil Surface Condition After Harvest (ICNAH)	3 (residue)			PIC	
Date of Crop Emergence (EMD, EMM, IRYEM)	May 16			PIC	good

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Date of Crop Maturity (MAD, MAM, IYRMAT)	September 16			PIC	good
Date of Crop Harvest (HAD, HAM,IYRHAR)	October 1			PIC	good
Maximum Dry Weight	0 kg m^{-2}				
Maximum canopy height (HTMAX)	300 cm				
Number of USLE C Factor Values (NUSLEC)	3				
	Fallow	Cropped	Residue		
SCS Curve Number (CN)	86	78	82	PIC	fair
USLE C Factor (USLEC)	0.50	0.50	0..5	PIC	fair
Mannings n (MNGN)	.04	.04	.04	???	fair
Parameters For Third Crop (ICNCN = 3)					
Maximum rainfall interception storage of crop (CINTCP)	0.20 cm			PIC	fair
Maximum Active Root Depth (AMAXDR)	125 cm			PIC	fair
Maximum Canopy Coverage (COVMAX)	98%				
Soil Surface Condition After Harvest (ICNAH)	3 (residue)			PIC	
Date of Crop Emergence (EMD, EMM, IRYEM)	May 1			PIC	
Date of Crop Maturity (MAD, MAM, IYRMAT)	September 7			PIC	
Date of Crop Harvest (HAD, HAM,IYRHAR)	September 22			PIC	
Maximum Dry Weight	0 kg m^{-2}				
Maximum canopy height (HTMAX)	120 cm				
Number of USLE C Factor Values (NUSLEC)	3				
	Fallow	Cropped	Residue		
SCS Curve Number (CN)	86	78	82	PIC	fair
USLE C Factor (USLEC)	0.50	0.50	0.50	PIC	fair
Mannings n (MNGN)	.023	.023	.023	???	fair

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Table A-5. PRZM 3 soil parameters for a Keomah silt loam in a corn field in Macoupin County, Illinois.

Parameter	Value	Source	Quality
Total Soil Depth (CORED)	152 cm	PIC	good
Number of Horizons (NHORIZ)	4	PIC	good
First Soil Horizon (HORIZN = 1)			
Horizon Thickness (THKNS)	22 cm	NSCD*	good
Bulk Density (BD)	1.4 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.361 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	0.1 cm	standard	
Field Capacity (THEFC)	0.361 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.141 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	1.16%	NSCD*	good
Second Soil Horizon (HORIZN = 2)			
Horizon Thickness (THKNS)	11 cm	NSCD*	good
Bulk Density (BD)	1.53 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.361 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	5 cm		
Field Capacity (THEFC)	0.326 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.104 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	0.28%	NSCD*	good
Third Soil Horizon (HORIZN = 3)			
Horizon Thickness (THKNS)	56 cm	NSCD*	good
Bulk Density (BD)	1.4 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.361 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	5 cm		
Field Capacity (THEFC)	0.423 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.245 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	0.22%	NSCD*	good
Fourth Soil Horizon (HORIZN = 4)			
Horizon Thickness (THKNS)	63 cm	NSCD*	good
Bulk Density (BD)	1.44 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.390 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	5 cm		
Field Capacity (THEFC)	0.390 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.134 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	0.11%	NSCD*	good

* National Soil Characterization Database

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Table A-6. PRZM 3 soil parameters for a Clinton silt loam in a corn field in Macoupin County, Illinois.

Parameter	Value	Source	Quality
Total Soil Depth (CORED)	178 cm	NCSD*	good
Number of Horizons (NHORIZ)	4	NCSD*	good
First Soil Horizon (HORIZN = 1)			
Horizon Thickness (THKNS)	13 cm	NSCD*	good
Bulk Density (BD)	1.3 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.421 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	0.1 cm	standard	
Field Capacity (THEFC)	0.421 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.201 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	2.80%	NSCD*	good
Second Soil Horizon (HORIZN = 2)			
Horizon Thickness (THKNS)	27 cm	NSCD*	good
Bulk Density (BD)	1.30 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.421 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	5 cm		
Field Capacity (THEFC)	0.421 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.201 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	1.067%	NSCD*	good
Third Soil Horizon (HORIZN = 3)			
Horizon Thickness (THKNS)	60 cm	NSCD*	good
Bulk Density (BD)	1.35 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.451 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	5 cm		
Field Capacity (THEFC)	0.451 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.251 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	0.40%	NSCD*	good
Fourth Soil Horizon (HORIZN = 4)			
Horizon Thickness (THKNS)	78 cm	NSCD*	good
Bulk Density (BD)	1.40 g $\cdot$cm^{-3}	NSCD*	good
Initial Water Content (THETO)	0.416 cm^3-H_2O $\cdot$cm^3-soil	standard	
Compartment Thickness (DPN)	5 cm		
Field Capacity (THEFC)	0.416 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Wilting Point	0.216 cm^3-H_2O $\cdot$cm^3-soil	NSCD*	good
Organic Carbon Content	0.167%	NSCD*	good

* National Soil Characterization Database

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