Parameter list of the Dssat RIX file when the farmer use it as an application.

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1 Type of the planting method

"Transplanting" or "Direct-sowing"

If "Transplanting"(PLME="T") is selected, farmer should add the doy of transplanting(PDATE, yydoy), duration before the seedling is planted(PAGE) and temperature of the growth environment(PENV).
Below is the example of the condition that transplanting doy is 213 of 2006, the seedling age is 35days-old and temperature of the nursery environment is 30degree.

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PLANTING DETAILS
@P PDATE EDATE PPOP PPOE PLME PLDS PLRS PLRD PLDP PLWT PAGE PENV PLPH SPRL PLNAME
1 06213 -99 33 33 T L 20 0 3 -99 35 30 1 0 -99
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If "Direct-sowing"(PLME="S") is selected, farmer should only choose the seeding doy as "PDATE".

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PLANTING DETAILS
@P PDATE EDATE PPOP PPOE PLME PLDS PLRS PLRD PLDP PLWT PAGE PENV PLPH SPRL PLNAME
1 06213 -99 33 33 S L 20 0 3 -99 -99 -99 1 0 -99
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2 Type of the cultivation

"Organic" or "Inorganic" or "both"

If "Organic" is selected, the parameter "MF" will be set as 0, while "MR" set as 1.

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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 F1 I1 1 1 0 1 1 1 0 1 0 0 0 0 1
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And If the farmer add organic fertilizer 300kg/ha twice(in August 1st(=213) and September 30th(=273)), parameter will be below.

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RESIDUES AND ORGANIC FERTILIZER
@R RDATE RCOD RAMT RESN RESP RESK RINP RDEP RMET RENAME
1 06213 RE001 300 .5 -99 -99 -99 10 -99 -99
1 06273 RE001 300 .5 -99 -99 -99 10 -99 -99
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If "Inorganic" is selected, the parameter "MF" will be set as 1, while "MR" set as 0.

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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 F1 I1 1 1 0 1 1 1 1 0 0 0 0 0 1
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And If the farmer add fertilizer 40kgN/ha twice(in August 1st(=213) and September 10th(=253)), parameter will be

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FERTILIZERS (INORGANIC) @F FDATE FMCD FACD FDEP FAMN FAMP FAMK FAMC FAMO FOCD FERNAME
1 06213 FE005 AP001 1 40 -99 -99 -99 -99 -99 -99
1 06253 FE005 AP001 1 40 -99 -99 -99 -99 -99 -99
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If "both" is selected, both "MR" and "MF" parameters will be set as 1.

”””””””””””””””

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 F1 I1 1 1 0 1 1 1 1 1 0 0 0 0 1
”””””””””””””””

3 Variety of rice

”KDML105”: TR0001,
”NIEW SANPATONG”: TR0002,
”SUPANBURI 60”: TR0003,
”CHAINAT 1”: TR0004,
”DOA 1”: TR0005

If KDML105 is selected, the parameter will be set as

”””””””””””””””

CULTIVARS @C CR INGENO CNAME 1 RI TR0001 KDML105
”””””””””””””””

4 Type of water management

”Irrigated” or ”Non Irrigated(Rain-fed)”

If Irrigated is selected, the parameter ”MI” will be set as 1.

”””””””””””””””

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 F1 I1 1 1 0 1 1 1 1 0 0 0 0 0 1
”””””””””””””””

And the default is to keep the water 5cm depth.

”””””””””””””””

IRRIGATION AND WATER MANAGEMENT
@I EFIR IDEP ITHR IEPT IOFF IAME IAMT IRNAME
1 1 -99 -99 -99 -99 -99 5 -99
@I IDATE IROP IRVAL

1 06213 IR010 0 !To show that the field has hardpan horizon
1 06213 IR008 10 !To show the daily water loss from field
1 06213 IR009 150 !To show the upper limit of water depth in the field
1 06213 IR011 50 !To show the irrigated depth(mm)

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If "Non-irrigated" is selected, the parameter "MI" will be set as 0.

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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 F1 I1 1 1 0 1 1 0 1 0 0 0 0 0 1
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5 Type of the soil

Currently only use the "WI_GLTH008" as "ID_SOIL"

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FIELDS
@L ID_FIELD WSTA.... FLSA FLOB FLDT FLDD FLDS FLST SLTX SLDP ID_SOIL
FLNAME
1 SISA0601 SISA0601 -99 0 DR000 0 0 00000 -99 150 WI_GLTH008 -99
@L .....XCRD .....YCRD .....ELEV .....AREA .SLEN .FLWR .SLAS FLHST
FHDUR
1 0 0 0 0 0 0 0 -99 -99
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6 Initial conditions

Initial condition should be measured one week before the first fertilization.

If first RDATE(organic) or FDATE(inorganic) is 06213, ICDAT should be set as 06206.

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INITIAL CONDITIONS

@C PCR ICDAT ICRT ICND ICRN ICRE ICWD ICRES ICREN ICREP ICRIP ICRID ICNAME
1 -99 06206 -99 -99 -99 -99 -99 0 0 0 0 15 -99
@C ICBL SH2O SNH4 SNO3
1 5 .2 0.73 4.89 !This is the default value in Reitong farm
1 15 .2 0.29 0.51
1 30 .2 0.04 0.54
1 42 .2 0.08 1.02
1 55 .2 0.07 1.20
1 67 .2 0.11 1.89
”””””””””””””””

7 The starting doy of the simulation(”SDATE”)

The starting doy of the simulation(”SDATE”) should be same as the ”ICDAT”.

If ”ICDAT” is set as 06206, ”SDATE” parameter will be set as 06206.

”””””””””””””””
SIMULATION CONTROLS
@N GENERAL NYERS NREPS START SDATE RSEED SNAME..... SMODEL
1 GE 1 1 S 06206 2150 DEFAULT SIMULATION CONTR
@N OPTIONS WATER NITRO SYMBI PHOSP POTAS DISES CHEM TILL CO2
1 OP Y Y N N N N N N 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
@N MANAGEMENT PLANT IRRIG FERTI RESID HARVS
1 MA R R R R M
@N OUTPUTS FNAME OVVEW SUMRY FROPT GROUT CAOUT WAOUT NIOUT MIOUT DIOUT VBOSE CHOUT OPOUT
1 OU N Y Y 1 Y N Y Y N N Y N N

@ AUTOMATIC MANAGEMENT
@N PLANTING PFRST PLAST PH2OL PH2OU PH2OD PSTMX PSTMN
1 PL 82050 82064 40 100 30 40
@N IRRIGATION IMDEP ITHRL ITHRU IROFF IMETH IRAMT IREFF
1 IR 30 50 100 GS000 IR001 10 1

@N NITROGEN NMDEP NMTHR NAMNT NCODE NAOFF
1 NI 30 50 25 FE001 GS000
@N RESIDUES RIPCN RTIME RIDEP
1 RE 100 1 20
@N HARVEST HFRST HLAST HPCNP HPCNR
1 HA 0 83057 100 0
”””””””””””””””