omafra_26076_E_2000-2005

Studying the interaction of crop management practices and weather and the subsequent effect on nitrous oxide emissions, 2000-2005 [Canada]: Meteorological data

Codebook

NOTE: This codebook provides an explanation of variables and codes found in all of the files contained within the study "Studying the interaction of crop management practices and weather and the subsequent effect on nitrous oxide emissions, 2000-2005 [Canada]: Meteorological data". The codebook is organized by file name.

Agri-environmental Research Data Repository
University of Guelph
50 Stone Road East
Guelph, Ontario N1G 2W1
http://dataverse.scholarsportal.info/dvn/dv/ugardr

Variable	Variable Description
Daily_Air_Temperature_1999-2005	
YEAR	Year data was measured
DOY	Day of year, units=Julian Day
OBS	Number of measurements made
AIR_TEMP	Daily air temperature, units=degrees Celsius

Variable	Variable Description

ERS_Meteorological_data_1999-JD2442003

ID	Datalogger identification number

Value	*Label*
9999	No Data

YEAR	Year data was measured

Value	*Label*
9999	No Data

JD	Day of year, units=Julian Day

Value	*Label*
9999	No Data

TIME	Time of measurement, units=hour, minute

Value	*Label*
9999	No Data

TA_ROSE	Air temperature Rosemont, units=degrees Celsius

Value	*Label*
9999	No Data

TA_VAIS	Air temperature Vaisala, units=degrees Celsius

Value	*Label*
9999	No Data

RH	Relative humidity, units=percent

Value	*Label*
9999	No Data

WTD	Water table depth, units=centimetres

Value	*Label*
9999	No Data

SOL_RAD	Solar radiation, units=Megajoules per metre squared

Value	*Label*
9999	No Data

NET_RAD	Net radiation, units=Megajoules per metre squared

Value	*Label*
9999	No Data

WIND_SP	Wind speed, units=kilometre per minute

Value	*Label*
9999	No Data

WIND_VM	Wind vector magnitude

Value	*Label*
9999	No Data

WIND_DIR	Wind direction

Value	*Label*
9999	No Data

WIND_DEV Wind direction standard deviation

Value	*Label*
9999	No Data

TOT_RAIN Total rainfall, units=millimetres

Value	*Label*
9999	No Data

AVG_TEMP Average temperature, units=degrees Celsius

Value	*Label*
9999	No Data

AVG_RH Average relative humidity, units=percent

Value	*Label*
9999	No Data

NO_SCAN Number of scans

Value	*Label*
9999	No Data

Variable	Variable Description

ERS_Meteorological_data_JD2522003-2005

TAB_ID	Table identification
YEAR	Year data was measured
DOY	Day of year, units=Julian Day
TIME	Time of measurement, units=UTC hour, minute
STAT_ID	Station ID
DATA_AV	Data availability, units=percent of hour
PRESS	Station pressure measured on the hour (1 minute mean), units=hectoPascals
AIR_TEMP	Air temperature measured on the hour (1 minute mean), units=degrees Celsius
RH1	Relative humidity measured on the hour (1 minute mean), units=percent
WSD1	Mean wind speed over minute 58 to 60, units=knots
MVM1	Mean vector magnitude over minute 58 to 60, units=knots
MVM_DIR1	Mean wind vector direction over minute 58 to 60, units=degrees true
SIGT1	Sigma theta over minute 58 to 60, units=degrees
WSDPK5_1	Peak 5 second wind speed over the past hour, units=knots
WSD_PKT	Peak wind speed time over the past hour, units= hour, minute
WSD_PDIR	Peak wind speed direction over the past hour, units= degrees true
WSDMAX2	Maximum 2 minute wind speed over the past hour, units=knots
TBRG_RN	Amount of rain measured by a tipping bucket rain gauge over the past hour, units=millimetres
WGR_15	Weighing gauge reading at 15 minutes, units=millimetres
WGR_30	Weighing gauge reading at 30 minutes, units=millimetres
WGR_45	Weighing gauge reading at 45 minutes, units=millimetres
WGR_60	Weighing gauge reading on the hour, units=millimetres
WGPREC	Weighing gauge precipitation over the past hour, units=millimetres
SNOW_GRD	Snow on ground over minute 58 to 60, units=millimetres

Value	*Label*
6999	No Data

SNOWFALL	Snowfall over past hour, units=millimetres

Value	*Label*
6999	No Data

WSD2	Mean wind speed over minute 50 to 60, units=knots
MVM2	Mean vector magnitude over minute 50 to 60, units=knots
MVM_DIR2	Mean wind vector direction over minute 50 to 60, units=degrees true
SIGT2	Sigma theta over minute 50 to 60, units=degrees
WSDPK5_2	Peak 5 second wind speed over minute 50 to 60, units=knots

WSDMAX10 Maximum 10 minute wind speed over past hour, units=knots

TEMP Averge temperature over 1 hour, units=degrees Celsius

RH2 Average relative humidity over 1 hour, units=percent

WSD3 Mean wind speed over 1 hour, units=knots

MVM3 Mean vector magnitude over 1 hour, units=knots

MVM_DIR3 Mean wind vector direction over 1 hour, units=degrees true

Value	*Label*
6999	No Sensor

SIGT3 Sigma theta standard deviation 1 hour average, units=degrees

SIGU Sigma U standard deviation 1 hour average, units=knots

MAX_TA Maximum air temperature over past hour, units=degrees Celsius

MIN_TA Minimum air temperature over past hour, units=degrees Celsius

UVB1 Ultraviolet B 1 hour average

Value	*Label*
6999	No Sensor

UVB5 Ultraviolet B last 5 minutes

Value	*Label*
6999	No Sensor

UVB_MAX5 Ultraviolet B 5 minute maximum

Value	*Label*
6999	No Sensor

SOIL_T1 Soil temperature, 5 centimetres under sod, 1 hour average, units=degrees Celsius

SOIL_T2 Soil temperature, 10 centimetres under sod, 1 hour average, units=degrees Celsius

SOIL_T3 Soil temperature, 20 centimetres under sod, 1 hour average, units=degrees Celsius

Value	*Label*
-72.8	False reading

RF1_RAD1 Radiofrequency radiation 1 hour total, units=kilowatt per metre squared

Value	*Label*
232.8	False reading
1463	False reading

RF1_RAD2 Radiofrequency radiation 1 hour average, units=kiloWatt per metre squared

SUN Sunshine over past hour, units=tenths of hour

WSD_2M 2 metre wind speed 1 hour average, units=kilometres per hour

GMT Grass minimum temperature over past hour, units=degrees Celsius

VIDEO1 Videograph on hour, units=nautical miles

Value	*Label*
6999	No Sensor

VIDEO2 Videograph 1 minute average maximum

Value	*Label*
6999	No Sensor

VIDEO3 Videograph 1 minute average minimum

Value	*Label*
6999	No Sensor

RF1_T1 Radiofrequency radiation total over minutes 55 to 60, units=Watts per metre squared

RF1_T2 Radiofrequency radiation total over minutes 0 to 5, units=Watts per metre squared

RF1_T3 Radiofrequency radiation total over minutes 5 to 10, units=Watts per metre squared

RF1_T4 Radiofrequency radiation total over minutes 10 to 15, units=Watts per metre squared

Value	*Label*
-6999	No Data

RF1_T5 Radiofrequency radiation total over minutes 15 to 20, units=Watts per metre squared

RF1_T6 Radiofrequency radiation total over minutes 20 to 25, units=Watts per metre squared

RF1_T7 Radiofrequency radiation total over minutes 25 to 30, units=Watts per metre squared

RF1_T8 Radiofrequency radiation total over minutes 30 to 35, units=Watts per metre squared

RF1_T9 Radiofrequency radiation total over minutes 35 to 40, units=Watts per metre squared

RF1_T10 Radiofrequency radiation total over minutes 40 to 45, units=Watts per metre squared

Value	*Label*
-86.2	False reading

RF1_T11 Radiofrequency radiation total over minutes 45 to 50, units=Watts per metre squared

RF1_T12 Radiofrequency radiation total over minutes 50 to 55, units=Watts per metre squared

LEAF_WET Leaf wetness 1 hour average, units=volts

Value	*Label*
-6999	No Data
-0.001	False reading
332.3	False reading

SOIL_T4 Soil temperature, 50 centimetres under sod, 1 hour average, units=degrees Celsius

SOIL_T5 Soil temperature, 100 centimetres under sod, 1 hour average, units=degrees Celsius

SOIL_T6 Soil temperature, 150 centimetres under sod, 1 hour average, units=degrees Celsius

SOIL_T7 Soil temperature, 300 centimetres under sod, 1 hour average, units=degrees Celsius

UNK_1 Unknown, illegible

UNK_2 Unknown, illegible

WLG_OUT Water level gauge output

Value	*Label*
-100.3	False reading

Variable	Variable Description
Snow_depth_2000-2005	
YEAR	Year data was measured
DOY	Day of year, units=Julian Day
TIME	Time measurement was taken, units=hours,minutes
PLOT1	Depth of snow measured in Plot 1, units=centimetres
PLOT2	Depth of snow measured in Plot 2, units=centimetres
PLOT3	Depth of snow measured in Plot 3, units=centimetres
PLOT4	Depth of snow measured in Plot 4, units=centimetres

Variable	Variable Description

Weather_Vector_Data_2000-2005

YEAR	Year data was measured
DOY	Day of year, units=Julian Day
TIME	Time measurement was taken, units=hour, minute
ATEMP	Air temperature vector, units=degrees Celsius

Value	*Label*
9999	No Data

WINDDIR	Wind direction vector, units=degrees true

Value	*Label*
9999	No Data

SOLRAD	Solar radiaion vector, units=MegaJoules per metre squared

Value	*Label*
9999	No Data

NETRAD	Net radiation vector, units=Watts per metre squared

Value	*Label*
9999	No Data

HNETRAD	Sensible heat vector (empirical, HNETRAD=0.26*NETRAD), units=Watts per metre squared

Value	*Label*
9999	No Data

HCOMB	Sensible heat vector combined (see Vector_Data_NOTES_2000-2005.txt for details), units=Watts per metre squared

Value	*Label*
9998	Not Grown

HVCOMB	Virtual sensible heat vector combined (see Vector_Data_NOTES_2000-2005.txt for details), units=Watts per metre squared

Value	*Label*
9999	No Data

HVUNF	Unfilterd virtual sensible heat vector (see Vector_Data_NOTES_2000-2005.txt for details), units=Watts per metre squared

Value	*Label*
9999	No Data

HCOMBEM	Empirical sensible heat vector combined (see Vector_Data_NOTES_2000-2005.txt for details), units=Watts per metre squared

Value	*Label*
9999	No Data

HVCOMBEM	Empirical virtual sensible heat vector combined (see Vector_Data_NOTES_2000-2005.txt for details), units=Watts per metre squared

Value	*Label*
9999	No Data

HVUNFEM	Empirical unfiltered virtual sensible heat vector (see Vector_Data_NOTES_2000-2005.txt for details), units=Watts per metre squared

Value	*Label*
9999	No Data