

Package ‘ALUES’

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Type Package

Title Agricultural Land Use Evaluation System

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Maintainer Al-Ahmadgaid B. Asaad <alahmadgaid@gmail.com>

Author Al-Ahmadgaid B. Asaad [aut, cre] (ORCID:
<<https://orcid.org/0000-0003-3784-8593>>),
Arnold R. Salvacion [aut] (ORCID:
<<https://orcid.org/0000-0001-8868-2226>>),
Bui Tan Yen [aut]

Description Evaluates land suitability for different crops production.
The package is based on the Food and Agriculture Organization (FAO) and the International Rice Research Institute (IRRI) methodology for land evaluation. Development of ALUES is inspired by similar tool for land evaluation, Land Use Suitability Evaluation Tool (LUSET). The package uses fuzzy logic approach to evaluate land suitability of a particular area based on inputs such as rainfall, temperature, topography, and soil properties. The membership functions used for fuzzy modeling are the following: Triangular, Trapezoidal and Gaussian. The methods for computing the overall suitability of a particular area are also included, and these are the Minimum, Maximum and Average. Finally, ALUES is a highly optimized library with core algorithms written in C++.

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LazyData true

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Suggests testthat, markdown, knitr, microbenchmark, ggmap, raster,
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BugReports <https://github.com/alstat/ALUES/issues/>

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ALUES-package	<i>Agricultural Land Use Evaluation System</i>
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Description

Agricultural Land Use Evaluation System (ALUES) is a package that evaluates land suitability for different crop production. The package is based on the Food and Agriculture Organization (FAO) and the International Rice Research Institute (IRRI) methodology for land evaluation. Development of ALUES is inspired by similar tool for land evaluation, Land Use Suitability Evaluation Tool (LUSET). The package uses fuzzy logic approach to evaluate land suitability of a particular area based on inputs such as rainfall, temperature, topography, and soil properties. The membership functions used for fuzzy modeling are the following: Triangular, Trapezoidal, Gaussian, Sigmoidal and custom models with functions that can be defined by the user. The package also aims on complicated methods like considering more than one fuzzy membership function on different suitability class. The methods for computing the overall suitability of a particular area are also included, and these are the Minimum, Maximum, Product, Sum, Average, Exponential and Gamma. Finally, ALUES utilizes the power of Rcpp library for efficient computation.

Author(s)

Al-Ahmadgaid B. Asaad <alahmadgaid@gmail.com> (maintainer)

Arnold R. Salvacion <arsalvacion@gmail.com>

Bui Tan Yen

ALFALFASoil	<i>Alfalfa soil requirement for land evaluation</i>
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Description

A dataset containing the soil characteristics of the crop requirements for farming Alfalfa.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- SoilTe - 12 classes of soil texture (Soil Taxonomy)
- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECE (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

ALFALFATemp

Alfalfa temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Alfalfa.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

ALFALFATerrain

Alfalfa terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Alfalfa.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

ALFALFAWater

Alfalfa water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Alfalfa.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- CropLen - Length of growing period (days)
- WgAv - Precipitation of growing cycle (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 AVOCADOSoil

Avocado soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Avocado.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 AVOCADOTemp

Avocado temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Avocado.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmMinXm - Avarage minimum temperature of coldest month (C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 AVOCADOTerrain

Avocado terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Avocado.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 AVOCADOWater

Avocado water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Avocado.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 BAMBOOSoil

Bamboo soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Bamboo.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- SoilDpt - Soil depth (cm)
- OC - Organic carbon (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)
- pHH2O - pH H2O

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BAMBOOTemp

*Bamboo temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Bamboo.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BAMBOOTerrain

*Bamboo terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Bamboo.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BAMBOOWater

Bamboo water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Bamboo.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BANANASoil

Banana soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Banana.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyphs - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)

- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BANANATemp

Banana temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Banana.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyMaxAv - Mean annual maximum temperature (°C)
- TmMinXm - Avarage minimum temperature of coldest month (C)
- TmMinXmAb - Absolute min temp. coldest month (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BANANATerrain

Banana terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Banana.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BANANAWater

Banana water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Banana.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BARLEYSoil

*Barley soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Barley.

Format

A data frame with 13 rows and 8 columns

Details

The following are the factors for evaluation:

- CFrags - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC6 - Organic carbon (%) - Kaolinitic materials
- OC7 - Organic carbon (%) - Non Kaolinitic, Non calcareous materials
- OC8 - Organic carbon (%) - Calcareous materials
- ECedS - ECe (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 BARLEYTemp

Barley temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Barley.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TmAv2 - Mean temp. crop development stage (2nd month) (°C)
- TmAv3 - Mean temp. of the flowering stage (°C)
- TmAv4 - Mean temp. of the ripening stage (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 BARLEYTerrain

Barley terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Barley.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BARLEYWater*Barley water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Barley.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BEANCASoil*Castor Beans soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Castor Beans.

Format

A data frame with 9 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 BEANCATemp

Castor Beans temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Castor Beans.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv1 - Mean temp. of the initial stage(C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BEANCATerrain

*Castor Beans terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Castor Beans.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BEANCAWater

*Castor Beans water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Castor Beans.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmhAv3 - Relative humidity of maturation Stage (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BEANSSoil

*Beans soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Beans.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyphs - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BEANSTemp

*Beans temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Beans.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

BEANSTerrain

*Beans terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Beans.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 BEANSWater

Beans water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Beans.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmhAv2 - Relative humidity of devel. Stage (%)
- WmhAv3 - Relative humidity of maturation Stage (%)
- WmnN2 - n/N develop. Stage (2nd month)
- WmnN4 - n/N maturation stage (4th month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 CABBAGESoil

Cabbage soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Cabbage.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECE (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CABBAGETemp

Cabbage temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Cabbage.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv0 - Mean temp. at germination (°C) (1st month)
- TdDiff - Temp difference day/night (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CABBAGETerrain	<i>Cabbage terrain requirement for land evaluation</i>
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Description

A dataset containing the terrain characteristics of the crop requirements for farming Cabbage.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CABBAGEWater	<i>Cabbage water requirement for land evaluation</i>
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Description

A dataset containing the water characteristics of the crop requirements for farming Cabbage.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CARROTSSoil*Carrots soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Carrots.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECE (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CARROTSTemp

Carrots temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Carrots.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv0 - Mean temp. at germination (°C) (1st month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CARROTSTerrain

Carrots terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Carrots.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CARROTSWater*Carrots water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Carrots.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASHEWSoil*Cashew soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Cashew.

Format

A data frame with 8 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASHEWTemp

Cashew temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Cashew.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TyMaxAv - Mean annual maximum temperature (°C)
- TmMinXm - Average minimum temperature of coldest month (C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASHEWTerrain

*Cashew terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Cashew.

Format

A data frame with 8 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASHEWWater

*Cashew water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Cashew.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASSAVASoil

*Cassava soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Cassava.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm1 - Coarse fragment in surface (Vol.%)
- CFragm2 - Coarse fragment in depth (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASSAVATemp

*Cassava temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Cassava.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyMaxAv - Mean annual maximum temperature (°C)
- TmMinXmAb - Absolute min temp. coldest month (°C)
- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASSAVATerrain

*Cassava terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Cassava.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CASSAVAWater

*Cassava water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Cassava.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmnN5 - n/N of the 5 dryest months

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CHICKPEASoil

*Chickpea soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Chickpea.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{edS} - EC_e (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CHICKPEATemp

Chickpea temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Chickpea.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CHICKPEATerrain

*Chickpea terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Chickpea.

Format

A data frame with 8 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CHICKPEAWater

*Chickpea water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Chickpea.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CINNAMONSoil

Cinnamon soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Cinnamon.

Format

A data frame with 9 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CINNAMONTemp

*Cinnamon temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Cinnamon.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CINNAMONTerrain

*Cinnamon terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Cinnamon.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- SlopeD - Slope (degree, 6 classes)
- Flood - Flooding

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CINNAMONWater

*Cinnamon water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Cinnamon.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CITRUSSoil

*Citrus soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Citrus.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)

- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CITRUSTemp

Citrus temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Citrus.

Format

A data frame with 8 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TmMax38 - No of months with mean temp. > 38 °C
- TmMin13 - No of months with mean temp. < 13 °C
- TyMinAb - Absolute minimum temperature (°C)
- TyMinAb - Absolute minimum temperature (°C)
- TyMinAb - Absolute minimum temperature (°C)
- TyMinAb - Absolute minimum temperature (°C)
- TmAv3 - Mean temp. of the flowering stage (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CITRUSTerrain

*Citrus terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Citrus.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CITRUSWater

*Citrus water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Citrus.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmhColdXm - Relative humidity of coldest month if frost (%)
- WmhAv4 - Relative humidity at harvest stage (%)
- WmhAv3 - Relative humidity of maturation Stage (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCOASoil

*Cocoa soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Cocoa.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCOATemp

*Cocoa temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Cocoa.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TyMaxAv - Mean annual maximum temperature (°C)
- TyMaxAv - Mean annual maximum temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCOATerrain

*Cocoa terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Cocoa.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCOAWater

Cocoa water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Cocoa.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmhDryXm - Mean rel. humidity dryest month (%)
- WmhDryXm - Mean rel. humidity dryest month (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCONUTSoil

Coconut soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Coconut.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- OC - Organic carbon (%)
- ECemh - ECe (mmhos/cm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCONUTTemp

Coconut temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Coconut.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCONUTTerrain

Coconut terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Coconut.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COCONUTWater

Coconut water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Coconut.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WyhAv - Mean annual rel. humidity (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEARSoil*Arabica Coffee soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Arabica Coffee.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEARTemp

Arabica Coffee temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Arabica Coffee.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyMaxAv - Mean annual maximum temperature (°C)
- TdMinXm - Mean daily minimum temperature of coldest month (°C)
- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEARTerrain

Arabica Coffee terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Arabica Coffee.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEARWater*Arabica Coffee water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Arabica Coffee.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmhDryXm - Mean rel. humidity dryest month (%)
- WmnN5 - n/N of the 5 dryest months

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEROSoil*Robusta Coffee soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Robusta Coffee.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEROTemp

Robusta Coffee temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Robusta Coffee.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TyMaxAv - Mean annual maximum temperature (°C)
- TdMinXm - Mean daily minimum temperature of coldest month (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEROTerrain

*Robusta Coffee terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Robusta Coffee.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COFFEEROWater

*Robusta Coffee water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Robusta Coffee.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmhDryXm - Mean rel. humidity dryest month (%)
- WmnN5 - n/N of the 5 dryest months

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COTTONSoil

*Cotton soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Cotton.

Format

A data frame with 13 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragment - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC6 - Organic carbon (%) - Kaolinitic materials
- OC7 - Organic carbon (%) - Non Kaolinitic, Non calcareous materials
- OC8 - Organic carbon (%) - Calcareous materials
- ECcmh - ECe (mmhos/cm)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COTTONTemp

Cotton temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Cotton.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMaxAv - Mean max temp. of growing cycle (°C)
- TmMaxXm - Average max. temp. warmest month (°C)
- TmAv2 - Mean temp. crop development stage (2nd month) (°C)
- TdAvg3 - Mean DAY temp. of flowering stage (°C)
- TdMinN3 - Mean Night temp. of flowering stage (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COTTONTerrain

Cotton terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Cotton.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- Slope - nan

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COTTONWater

Cotton water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Cotton.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv5 - Mean precipitation of fifth month (mm)
- WmAv6 - Precipitation of ripening stage (mm)(6th month)
- WmhAv3 - Relative humidity of maturation Stage (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COWPEASoil

*Cowpea soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Cowpea.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragn - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COWPEATemp

*Cowpea temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Cowpea.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv0 - Mean temp. at germination (°C) (1st month)
- TyMinAv - Mean annual minimum temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COWPEATerrain

Cowpea terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Cowpea.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

COWPEAWater*Cowpea water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Cowpea.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv4 - Relative humidity at harvest stage (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CUCUMBERSoil*Cucumber soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Cucumber.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CUCUMBERTemp

Cucumber temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Cucumber.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CUCUMBERTerrain	<i>Cucumber terrain requirement for land evaluation</i>
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Description

A dataset containing the terrain characteristics of the crop requirements for farming Cucumber.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- SlopeD - Slope (degree, 6 classes)
- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

CUCUMBERWater	<i>Cucumber water requirement for land evaluation</i>
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Description

A dataset containing the water characteristics of the crop requirements for farming Cucumber.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

GROUNDNUTSSoil

*Groundnuts soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Groundnuts.

Format

A data frame with 15 rows and 8 columns

Details

The following are the factors for evaluation:

- CFrags - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyss - Gypsum (%)
- CECs - Apparent CEC Soil (cmol (+)/kg soil)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H_{2O}
- OC6 - Organic carbon (%) - Kaolinitic materials
- OC7 - Organic carbon (%) - Non Kaolinitic, Non calcareous materials
- OC8 - Organic carbon (%) - Calcareous materials
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- OC - Organic carbon (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

GROUNDNUTSTemp

*Groundnuts temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Groundnuts.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMaxAv - Mean max temp. of growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

GROUNDNUTSTerrain

*Groundnuts terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Groundnuts.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

GROUNDNUTSWater

Groundnuts water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Groundnuts.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

GUAVASoil

Guava soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Guava.

Format

A data frame with 9 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 GUAVATemp

Guava temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Guava.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 GUAVATerrain

Guava terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Guava.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 GUAVAWater

Guava water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Guava.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

LaoCaiLT*Land and Terrain Characteristics of Lao Cai, Vietnam*

Description

A dataset containing the land and terrain characteristics of the land units in Lao Cai, Vietnam.

Format

A data frame with 2928 rows and 10 columns

Details

- SlopeD - Slope (degree, 6 classes);
- CFragm - Coarse fragment (Vol.%);
- SoilDpt - Soil depth (cm);
- SoilTe - 12 classes of soil texture (Soil Taxonomy);
- CECc - Apparent CEC Clay (cmol (+)/kg clay);
- SumBCs - Sum of basic cations (cmol (+)/kg soil);
- pH_{H2O} - pH H₂O;
- BS - Base Saturation (%);
- OC - Organic carbon (%);
- Flood - Flooding;

LaoCaiTemp*Temperature Characteristics of Lao Cai, Vietnam*

Description

A dataset containing the temperature characteristics of the land units in Lao Cai, Vietnam.

Format

A data frame with 2928 rows and 12 columns

Details

- Jan - January;
- Feb - February;
- Mar - March;
- Apr - April;
- May - May;
- Jun - June;
- Jul - July;
- Aug - August;
- Sep - September;
- Oct - October;
- Nov - November;
- Dec - December;

LaoCaiWater

Water Characteristics of Lao Cai, Vietnam

Description

A dataset containing the water characteristics of the land units in Lao Cai, Vietnam.

Format

A data frame with 2928 rows and 12 columns

Details

- Jan - January;
- Feb - February;
- Mar - March;
- Apr - April;
- May - May;
- Jun - June;
- Jul - July;
- Aug - August;
- Sep - September;
- Oct - October;
- Nov - November;
- Dec - December;

LONGANSoil*Longan soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Longan.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

LONGANTemp

Longan temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Longan.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TdMinXm - Mean daily minimum temperature of coldest month (°C)
- TyMinAv - Mean annual minimum temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

LONGANTerrain

Longan terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Longan.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

LONGANWater

Longan water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Longan.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MAIZESoil

Maize soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Maize.

Format

A data frame with 15 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC6 - Organic carbon (%) - Kaolinitic materials
- OC7 - Organic carbon (%) - Non Kaolinitic, Non calcareous materials
- OC8 - Organic carbon (%) - Calcareous materials
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- OC - Organic carbon (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MAIZETemp

Maize temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Maize.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MAIZETerrain*Maize terrain requirement for land evaluation*

Description

A dataset containing the terrain characteristics of the crop requirements for farming Maize.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MAIZEWATER*Maize water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Maize.

Format

A data frame with 9 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv2 - Relative humidity of devel. Stage (%)
- WmhAv3 - Relative humidity of maturation Stage (%)
- WmnN2 - n/N develop. Stage (2nd month)
- WmnN4 - n/N maturation stage (4th month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MANGOSoil

Mango soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Mango.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCc - Sum of basic cations (cmol (+)/kg of clay)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MANGOTemp

*Mango temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Mango.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TyMinAv - Mean annual minimum temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MANGOTerrain

*Mango terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Mango.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1) Basin furrow irrigation
- Slope2 - Slope (%) (2) Mechanized, high management level
- Slope3 - Slope (%) (3) Manual, low management level
- Flood - Flooding
- Drainage - Drainage
- SlopeD - 6 classes of slope (Degree)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MANGOWater

Mango water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Mango.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmAvDry - Monthly precipitation during dry season (mm)
- WyhAv - Mean annual rel. humidity (%)
- WmnN4 - n/N maturation stage (4th month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MarinduqueLT

Land and Terrain Characteristics of Marinduque, Philippines

Description

A dataset containing the land and terrain characteristics of the land units in Marinduque, Philippines.

Format

A data frame with 881 rows and 6 columns

Details

- Lat - Latitude of Land Units;
- Lon - Longitude of Land Units;
- CECc - Apparent CEC Clay (cmol (+)/kg clay);
- pH_{H2O} - pH H₂O;
- CFragm - Coarse fragment (Vol.%);
- SoilTe - 12 classes of soil texture (Soil Taxonomy);

MarinduqueTemp*Temperature Characteristics of Marinduque, Philippines*

Description

A dataset containing the temperature characteristics of the land units in Marinduque, Philippines.

Format

A data frame with 881 rows and 14 columns

Details

- Lat - Latitude of Land Units;
- Lon - Longitude of Land Units;
- Jan - January;
- Feb - February;
- Mar - March;
- Apr - April;
- May - May;
- Jun - June;
- Jul - July;
- Aug - August;
- Sep - September;
- Oct - October;
- Nov - November;
- Dec - December;

MarinduqueWater

Water Characteristics of Marinduque, Philippines

Description

A dataset containing the water characteristics of the land units in Marinduque, Philippines.

Format

A data frame with 881 rows and 14 columns

Details

- Lat - Latitude of Land Units;
- Lon - Longitude of Land Units;
- Jan - January;
- Feb - February;
- Mar - March;
- Apr - April;
- May - May;
- Jun - June;
- Jul - July;
- Aug - August;
- Sep - September;
- Oct - October;
- Nov - November;
- Dec - December;

MILLETSSoil

Millets soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Millets.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC6 - Organic carbon (%) - Kaolinitic materials
- ECedS - ECe (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MILLETSTemp

Millets temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Millets.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMaxAv - Mean max temp. of growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MILLETSTerrain

*Millets terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Millets.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

MILLETWater

*Millets water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Millets.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv4 - Relative humidity at harvest stage (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OILPALMSoil

*Oil Palm soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Oil Palm.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm2 - Coarse fragment in depth (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OILPALMTemp

*Oil Palm temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Oil Palm.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyMaxAv - Mean annual maximum temperature (°C)
- TdMinXm - Mean daily minimum temperature of coldest month (°C)
- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OILPALMTerrain

*Oil Palm terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Oil Palm.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope - Slope
- Flood - Flooding
- Drainage4 - Drainage (4) Medium & fine textured soils
- Drainage5 - Drainage (5) Coarse textured soils

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OILPALMWater

*Oil Palm water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Oil Palm.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WynN - Mean annual n/N

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OLIVESSoil

*Olives soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Olives.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)

- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OLIVESTemp

Olives temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Olives.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- Ty_{Av} - Mean annual temperature (°C)
- Tm_{MinXm} - Average minimum temperature of coldest month (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OLIVESTerrain

*Olives terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Olives.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

OLIVESWater

*Olives water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Olives.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmSpecial1 - Monthly rainfall during the sclerification of stone (mm) - August (N hem) February (S hem.)
- WmSpecial2 - Monthly rainfall during the sclerification of stone (mm) - September (N hem) March (S hem.)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 ONIONSoil

Onion soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Onion.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFrags - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyss - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

ONIONTemp

*Onion temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Onion.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv0 - Mean temp. at germination (°C) (1st month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

ONIONTerrain

*Onion terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Onion.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 ONIONWater

Onion water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Onion.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- TmAvDlen3 - Daylength (h) during yield form. Period

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 overall_suit

Overall Suitability Scores/Class of the Land Units

Description

This function computes the overall suitability scores and class of the land units.

Usage

```
overall_suit(suit, method = NULL, interval = NULL)
```

Arguments

suit	an object of class suitability.
method	a character for the method for computing the overall suitability, choices are: "minimum", "maximum", and "average". If NULL, method is set to "minimum".
interval	if NULL, the interval of the suitability class are the following: 0% - 25% (Not suitable, N), 25% - 50% (Marginally Suitable, S3), 50% - 75% (Moderately Suitable, S2), and 75% - 100% (Highly Suitable, S1). But users can assign custom intervals by specifying the values of the end points of the intervals. Say for intervals: 0% - 20% (Not suitable, N), 20% - 50% (Marginally Suitable, S3), 50% - 80% (Moderately Suitable, S2), and 80% - 100% (Highly Suitable, S1), is equivalent to interval = c(0, 0.2, 0.5, 0.8, 1).

Value

A data frame with columns:

- Score - the overall suitability scores
- Class - the overall suitability classes

See Also

[suit](https://alstat.github.io/ALUES/), <https://alstat.github.io/ALUES/>

Examples

```
library(ALUES)
out <- suit("ricebr", terrain=MarinduqueLT, water=MarinduqueWater, temp=MarinduqueTemp, sow_month=1)
out[["terrain"]]

# Soil Overall Suitability
head(overall_suit(out[["soil"]]))
head(overall_suit(out[["soil"]], "average"))
head(overall_suit(out[["soil"]], "maximum"))
head(overall_suit(out[["soil"]], "average", c(0, 0.3, 0.35, 0.6, 1.0)))

# Water Overall Suitability
head(overall_suit(out[["water"]], "average"))
head(overall_suit(out[["water"]], "maximum"))
head(overall_suit(out[["water"]], "average", c(0, 0.3, 0.35, 0.6, 1.0)))

# Temperature Overall Suitability
head(overall_suit(out[["temp"]], "average"))
head(overall_suit(out[["temp"]], "maximum"))
head(overall_suit(out[["temp"]], "average", c(0, 0.3, 0.35, 0.6, 1.0)))
```

PAPAYASoil

*Papaya soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Papaya.

Format

A data frame with 9 rows and 8 columns

Details

The following are the factors for evaluation:

- CFrags - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PAPAYATemp

*Papaya temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Papaya.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TyMinAv - Mean annual minimum temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PAPAYATerrain

Papaya terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Papaya.

Format

A data frame with 0 rows and 8 columns

Details

The following are the factors for evaluation:

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PAPAYAWater

Papaya water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Papaya.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WynN - Mean annual n/N
- WyhAv - Mean annual rel. humidity (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PEACHSoil

Peach soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Peach.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECE (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEACHTemp

Peach temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Peach.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEACHTerrain

Peach terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Peach.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PEACHWater

Peach water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Peach.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PEARSoil

Pear soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Pear.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)

- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEARTemp

Pear temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Pear.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEARTerrain

Pear terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Pear.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PEARWater

Pear water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Pear.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEASoil

Pea soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Pea.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragn - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEATemp

Pea temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Pea.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmMinAv0 - Mean min. temp. at germination (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PEATerrain

Pea terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Pea.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEAWater

*Pea water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Pea.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEPPERGRSoil

*Green Pepper soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Green Pepper.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyphs - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)

- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEPPERGRTemp

Green Pepper temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Green Pepper.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv0 - Mean temp. at germination (°C) (1st month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEPPERGRTerrain

Green Pepper terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Green Pepper.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- Slope - nan

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PEPPERGRWater

Green Pepper water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Green Pepper.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PERSIMMONSoil

Persimmon soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Persimmon.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PERSIMMONTemp

*Persimmon temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Persimmon.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PERSIMMONTerrain

*Persimmon terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Persimmon.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PERSIMMONWater

Persimmon water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Persimmon.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PINEAPPLESoil

Pineapple soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Pineapple.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyphs - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)

- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PINEAPPLETemp

Pineapple temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Pineapple.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PINEAPPLETerrain

Pineapple terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Pineapple.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PINEAPPLEWater

Pineapple water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Pineapple.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WyhAv - Mean annual rel. humidity (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

PLUMSoil*Plum soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Plum.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PLUMTemp

Plum temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Plum.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PLUMTerrain

Plum terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Plum.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 PLUMWater

Plum water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Plum.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 POTATOSoil

Potato soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Potato.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt1 - Surface Soil Depth (cm)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)

- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

POTATOSWSoil

Sweet Potato soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Sweet Potato.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO₃ - CaCO₃ (%)
- Gyphs - Gypsum (%)
- CEC_c - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

POTATOSWTemp

Sweet Potato temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Sweet Potato.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

POTATOSWTerrain

Sweet Potato terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Sweet Potato.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

POTATOSWWater

Sweet Potato water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Sweet Potato.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmhAv4 - Relative humidity at harvest stage (%)
- WmnN2 - n/N develop. Stage (2nd month)
- WmnN4 - n/N maturation stage (4th month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

POTATOTemp

Potato temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Potato.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmMinAv1 - Average absolut Min. temperature of the first month (°C)
- TmMinAv4 - Average absolut Min. temperature of other months (°C)
- TdAvgDiff - Average Temperature difference between day-night (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

POTATOTerrain

Potato terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Potato.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

POTATOWater

Potato water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Potato.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- TgAvDlen - Average daylength growing cycle (h)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEBRSoil

Rainfed Bunded Rice soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Rainfed Bunded Rice.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEBRTemp

Rainfed Bunded Rice temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Rainfed Bunded Rice.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmMaxXm - Average max. temp. warmest month (°C)
- TmAv2 - Mean temp. crop development stage (2nd month) (°C)
- TmMinAv4 - Average absolut Min. temperature of other months (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEBRTerrain

Rainfed Bunded Rice terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Rainfed Bunded Rice.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Flood - Flooding
- Drainage - Drainage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEBRWater

Rainfed Bunded Rice water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Rainfed Bunded Rice.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)

- WmhAv2 - Relative humidity of devel. Stage (%)
- WmhAv4 - Relative humidity at harvest stage (%)
- WynN - Mean annual n/N

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEIWSoil

Irrigated Rice soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Irrigated Rice.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic caions (cmol (+)/kg soil)
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- pHH2O - pH H2O
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEIWTemp

*Irrigated Rice temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Irrigated Rice.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmMaxXm - Average max. temp. warmest month (°C)
- TmAv2 - Mean temp. crop development stage (2nd month) (°C)
- TmMinAv4 - Average absolut Min. temperature of other months (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEIWTerrain

*Irrigated Rice terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Irrigated Rice.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEIWWater

*Irrigated Rice water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Irrigated Rice.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv2 - Relative humidity of devel. Stage (%)
- WmhAv4 - Relative humidity at harvest stage (%)
- WynN - Mean annual n/N

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICENFSoil	<i>Rice Cultivation under Natural Floods soil requirement for land evaluation</i>
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Description

A dataset containing the soil characteristics of the crop requirements for farming Rice Cultivation under Natural Floods.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICENFTemp	<i>Rice Cultivation under Natural Floods temp requirement for land evaluation</i>
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Description

A dataset containing the temp characteristics of the crop requirements for farming Rice Cultivation under Natural Floods.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmMaxXm - Average max. temp. warmest month (°C)
- TmAv2 - Mean temp. crop development stage (2nd month) (°C)
- TmMinAv4 - Average absolut Min. temperature of other months (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICENFTerrain	<i>Rice Cultivation under Natural Floods terrain requirement for land evaluation</i>
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Description

A dataset containing the terrain characteristics of the crop requirements for farming Rice Cultivation under Natural Floods.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- Flood - Flooding
- Drainage - Drainage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICENFWater

Rice Cultivation under Natural Floods water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Rice Cultivation under Natural Floods.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv2 - Relative humidity of devel. Stage (%)
- WmhAv4 - Relative humidity at harvest stage (%)
- WynN - Mean annual n/N

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEURSoil

*Rainfed Upland Rice soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Rainfed Upland Rice.

Format

A data frame with 8 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEURTemp

*Rainfed Upland Rice temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Rainfed Upland Rice.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmMaxXm - Average max. temp. warmest month (°C)
- TmAv2 - Mean temp. crop development stage (2nd month) (°C)
- TmMinAv4 - Average absolut Min. temperature of other months (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEURTerrain

Rainfed Upland Rice terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Rainfed Upland Rice.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RICEURWater*Rainfed Upland Rice water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Rainfed Upland Rice.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv2 - Relative humidity of devel. Stage (%)
- WmhAv4 - Relative humidity at harvest stage (%)
- WynN - Mean annual n/N

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RUBBERSoil*Rubber soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Rubber.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RUBBERTemp

Rubber temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Rubber.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TyMaxAv - Mean annual maximum temperature (°C)
- TdMinXm - Mean daily minimum temperature of coldest month (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RUBBERTerrain

*Rubber terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Rubber.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Flood - Flooding
- Drainage - Drainage
- Slope - nan

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

RUBBERWater

*Rubber water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Rubber.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmER - Months of excessive rain (x)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SAFFLOWERSoil

*Safflower soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Safflower.

Format

A data frame with 8 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragment - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SAFFLOWERTemp

*Safflower temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Safflower.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TmAv1 - Mean temp. of the initial stage(C)
- TmAv2 - Mean temp. crop development stage (2nd month) (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SAFFLOWERTerrain*Safflower terrain requirement for land evaluation*

Description

A dataset containing the terrain characteristics of the crop requirements for farming Safflower.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SAFFFLOWERWater*Safflower water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Safflower.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv3 - Relative humidity of maturation Stage (%)
- WmhAv4 - Relative humidity at harvest stage (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 SESAMESoil

Sesame soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Sesame.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 SESAMETemp

Sesame temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Sesame.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMaxAv - Mean max temp. of growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 SESAMETerrain

Sesame terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Sesame.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 SESAMEWater

Sesame water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Sesame.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 SORGHUMSoil

Sorghum soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Sorghum.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC6 - Organic carbon (%) - Kaolinitic materials
- OC7 - Organic carbon (%) - Non Kaolinitic, Non calcareous materials
- ECedS - ECE (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SORGHUMTemp

Sorghum temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Sorghum.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMaxAv - Mean max temp. of growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SORGHUMTerrain	<i>Sorghum terrain requirement for land evaluation</i>
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Description

A dataset containing the terrain characteristics of the crop requirements for farming Sorghum.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of management with full mechanization.)
- Slope3 - Slope (%) (3. Low level of management animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SORGHUMWater	<i>Sorghum water requirement for land evaluation</i>
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Description

A dataset containing the water characteristics of the crop requirements for farming Sorghum.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SOYASoil

*Soya soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Soya.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SOYATemp

Soya temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Soya.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TgMinAv - Mean min. temp. of growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SOYATerrain

Soya terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Soya.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SOYAWater

*Soya water requirement for land evaluation***Description**

A dataset containing the water characteristics of the crop requirements for farming Soya.

Format

A data frame with 9 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmhAv2 - Relative humidity of devel. Stage (%)
- WmhAv3 - Relative humidity of maturation Stage (%)
- WmnN2 - n/N develop. Stage (2nd month)
- WmnN4 - n/N maturation stage (4th month)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SUGARCANESoil

*Sugar Cane soil requirement for land evaluation***Description**

A dataset containing the soil characteristics of the crop requirements for farming Sugar Cane.

Format

A data frame with 15 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragment - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC6 - Organic carbon (%) - Kaolinitic materials
- OC7 - Organic carbon (%) - Non Kaolinitic, Non calcareous materials
- OC8 - Organic carbon (%) - Calcareous materials
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- OC - Organic carbon (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SUGARCANETemp

*Sugar Cane temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Sugar Cane.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TdAvg0 - Mean day temperature at germination stage(°C)
- TdAvg1 - Mean day temperature for tillage stage (°C)
- TdAvg2 - Mean day temperature for vegetative stage (°C)
- Tcoef - $(T_{max}-T_{min})/T_{mean}$ maturation stage

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SUGARCANETerrain

*Sugar Cane terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Sugar Cane.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SUGARCANEwater

Sugar Cane water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Sugar Cane.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- Wd10 - 10 days of rainfall (mm)
- SunH - Sunshine : hours/year
- WynN - Mean annual n/N
- WmhAv3 - Relative humidity of maturation Stage (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

suit

Suitability Scores/Class of the Land Units

Description

This function calculates the suitability scores and class of the land units.

Usage

```
suit(
  crop,
  terrain = NULL,
  water = NULL,
  temp = NULL,
  mf = "triangular",
  sow_month = NULL,
  minimum = NULL,
  maximum = "average",
  interval = NULL,
  sigma = NULL
)
```

Arguments

crop	a string for the name of the crop;
terrain	a data frame for the terrain characteristics of the input land units;
water	a data frame for the water characteristics of the input land units;
temp	a data frame for the temperature characteristics of the input land units;
mf	membership function with default assigned to "triangular" fuzzy model. Other fuzzy models included are "trapezoidal" and "gaussian".
sow_month	sowing month of the crop. Takes integers from 1 to 12 (inclusive), representing the twelve months of the year. So if sets to 1, the function assumes sowing month to be January.
minimum	factor's minimum value. If NULL (default), minimum is set to 0. But if numeric of length one, say 0.5, then minimum is set to 0.5, for all factors. To set multiple minimums for multiple factors, simply concatenate these into a numeric vector, the length of this vector should be equal to the number of factors in input land units parameters. However, it can also be set to "average", please refer to the online documentation for more, link in the "See Also" section below.
maximum	maximum value for factors. To set multiple maximums for multiple factors, simply concatenate these into a numeric vector, the length of this vector should be equal to the number of factors in input land units parameters. However, it can also be set to "average", please refer to the online documentation for more, link in the "See Also" section below.
interval	domains for every suitability class (S1, S2, S3). If fixed (NULL), the interval would be 0 to 25% for N (Not Suitable), 25% to 50% for S3 (Marginally Suitable), 50% to 75% for S2 (Moderately Suitable), and 75% to 100% for (Highly Suitable). If "unbias", the package will take into account the shape of the membership function, and provide the appropriate suitability class intervals. However, it can also be customized by specifying the limits of the suitability classes. Please refer to the online documentation for more, link in the "See Also" section below.
sigma	If mf = "gaussian", then sigma represents the constant sigma in the Gaussian formula.

Value

A list of outputs of target characteristics, with the following components:

- "terrain" - a list of outputs for terrain characteristics
- "soil" - a list of outputs for soil characteristics
- "water" - a list of outputs for water characteristics
- "temp" - a list of outputs for temperature characteristics

These components are only available when specified as the target characteristics in either of the arguments above, that is, if terrain argument is specified above, then the "terrain" and "soil" components will be available in the output list. This is also true if water and temp are specified in the arguments above.

Each of the components returned above contains a list of outputs as well with the following components:

- "Factors Evaluated" - a character of factors that matched between the input land units factor and the targetted crop requirement factor
- "Suitability Score" - a data frame of suitability scores for each of the matched factors
- "Suitability Class" - a data frame of suitability classes for each of the matched factors
- "Factors' Minimum Values" - a numeric of minimum values used in the membership function for computing the suitability scores
- "Factors' Maximum Values" - a numeric of maximum values used in the membership function for computing the suitability scores
- "Factors' Weights" - a numeric of weights of the factors specified in the input crop requirements
- "Crop Evaluated" - a character of the name of the targetted crop requirement dataset

See Also

<https://alstat.github.io/ALUES/>

Examples

```
library(ALUES)

rice_suit <- suit("ricebr", water=MarinduqueWater, temp=MarinduqueTemp, sow_month = 1)
lapply(rice_suit[["water"]], function(x) head(x)) # access results for water suitability
lapply(rice_suit[["temp"]], function(x) head(x)) # access results for temperature suitability
rice_suit <- suit("ricebr", terrain=MarinduqueLT)
lapply(rice_suit[["terrain"]], function(x) head(x))
lapply(rice_suit[["soil"]], function(x) head(x))
```

suitability

Suitability Scores/Class of the Land Units

Description

This function calculates the suitability scores and class of the land units.

Usage

```
suitability(
  x,
  y,
  mf = "triangular",
  sow_month = NULL,
  minimum = NULL,
  maximum = "average",
  interval = NULL,
  sigma = NULL
)
```

Arguments

x	a data frame consisting the properties of the land units;
y	a data frame consisting the requirements of a given characteristics (terrain, soil, water and temperature) for a given crop (e.g. coconut, cassava, etc.);
mf	membership function with default assigned to "triangular" fuzzy model. Other fuzzy models included are "trapezoidal" and "gaussian".
sow_month	sowing month of the crop. Takes integers from 1 to 12 (inclusive), representing the twelve months of the year. So if sets to 1, the function assumes sowing month to be January.
minimum	factor's minimum value. If NULL (default), minimum is set to 0. But if numeric of length one, say 0.5, then minimum is set to 0.5, for all factors. To set multiple minimums for multiple factors, simply concatenate these into a numeric vector, the length of this vector should be equal to the number of factors in input land units parameters. However, it can also be set to "average", please refer to the online documentation for more, link in the "See Also" section below.
maximum	maximum value for factors. To set multiple maximums for multiple factors, simply concatenate these into a numeric vector, the length of this vector should be equal to the number of factors in input land units parameters. However, it can also be set to "average", please refer to the online documentation for more, link in the "See Also" section below.
interval	domains for every suitability class (S1, S2, S3). If fixed (NULL), the interval would be 0 to 25% for N (Not Suitable), 25% to 50% for S3 (Marginally Suitable), 50% to 75% for S2 (Moderately Suitable), and 75% to 100% for (Highly

Suitable). If "unbias", the package will take into account the shape of the membership function, and provide the appropriate suitability class intervals. However, it can also be customized by specifying the limits of the suitability classes. Please refer to the online documentation for more, link in the "See Also" section below.

sigma If mf = "gaussian", then sigma represents the constant sigma in the Gaussian formula.

Value

A list with the following components:

- "Factors Evaluated" - a character of factors that matched between the input land units factor and the targetted crop requirement factor
- "Suitability Score" - a data frame of suitability scores for each of the matched factors
- "Suitability Class" - a data frame of suitability classes for each of the matched factors
- "Factors' Minimum Values" - a numeric of minimum values used in the membership function for computing the suitability scores
- "Factors' Maximum Values" - a numeric of maximum values used in the membership function for computing the suitability scores
- "Factors' Weights" - a numeric of weights of the factors specified in the input crop requirements
- "Crop Evaluated" - a character of the name of the targetted crop requirement dataset

#' @seealso <https://alstat.github.io/ALUES/>

SUNFLOWERSoil

Sunflower soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Sunflower.

Format

A data frame with 11 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyphs - Gypsum (%)

- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H₂O
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SUNFLOWERTemp

Sunflower temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Sunflower.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SUNFLOWERTerrain

Sunflower terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Sunflower.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

SUNFLOWERWater

Sunflower water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Sunflower.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv1 - Mean precipitation of first month (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)
- WmAv5 - Mean precipitation of fifth month (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 TEASoil

Tea soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Tea.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pH_{H2O} - pH H_{2O}
- OC - Organic carbon (%)
- EC_{dS} - EC_e (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

TEATemp

*Tea temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Tea.

Format

A data frame with 5 rows and 8 columns

Details

The following are the factors for evaluation:

- TyAv - Mean annual temperature (°C)
- TmMinAv - Mean min. temp. of warmest month (°C)
- TmMinXm - Avarage minimum temperature of coldest month (C)
- TmMaxXm - Average max. temp. warmest month (°C)
- TmAv4Xm - Mean temp. of 4 warmest month (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

TEATerrain

*Tea terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Tea.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Flood - Flooding
- Drainage - Drainage
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 TEAWater

Tea water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Tea.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- WyAv - Annual precipitation (mm)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WmDryLen - Length dry season (months : $P < 1/2$ PET)
- WyhAv - Mean annual rel. humidity (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 TOBACCOSoil

Tobacco soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Tobacco.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

TOBACCOTemp

*Tobacco temp requirement for land evaluation***Description**

A dataset containing the temp characteristics of the crop requirements for farming Tobacco.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

TOBACCOTerrain

*Tobacco terrain requirement for land evaluation***Description**

A dataset containing the terrain characteristics of the crop requirements for farming Tobacco.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 TOBACOWater

Tobacco water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Tobacco.

Format

A data frame with 3 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WynN - Mean annual n/N
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

 TOMATOSoil

Tomato soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Tomato.

Format

A data frame with 12 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - 12 classes of soil texture (Soil Taxonomy)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

TOMATOTemp

Tomato temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Tomato.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv0 - Mean temp. at germination (°C) (1st month)
- TmAv3 - Mean temp. of the flowering stage (°C)
- TdDiff3 - Temp. diff day/night flowering stage (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

TOMATOTerrain

Tomato terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Tomato.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

TOMATOWater

Tomato water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Tomato.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WATERMELONSoil

Watermelon soil requirement for land evaluation

Description

A dataset containing the soil characteristics of the crop requirements for farming Watermelon.

Format

A data frame with 10 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- ECedS - ECe (dS/m)
- ESP - ESP (%)
- SoilTe - nan

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WATERMELONTemp

Watermelon temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Watermelon.

Format

A data frame with 1 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WATERMELONTerrain

Watermelon terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Watermelon.

Format

A data frame with 7 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)
- SlopeD - Slope (degree, 6 classes)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WATERMELONWater*Watermelon water requirement for land evaluation*

Description

A dataset containing the water characteristics of the crop requirements for farming Watermelon.

Format

A data frame with 2 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WghAv - Relative humidity growing cycle (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WHEATSoil*Wheat soil requirement for land evaluation*

Description

A dataset containing the soil characteristics of the crop requirements for farming Wheat.

Format

A data frame with 14 rows and 8 columns

Details

The following are the factors for evaluation:

- CFragm - Coarse fragment (Vol.%)
- SoilDpt - Soil depth (cm)
- CaCO3 - CaCO3 (%)
- Gyps - Gypsum (%)
- CECc - Apparent CEC Clay (cmol (+)/kg clay)
- BS - Base Saturation (%)
- SumBCs - Sum of basic cations (cmol (+)/kg soil)
- pHH2O - pH H2O
- OC - Organic carbon (%)
- OC6 - Organic carbon (%) - Kaolinitic materials
- OC7 - Organic carbon (%) - Non Kaolinitic, Non calcareous materials
- OC8 - Organic carbon (%) - Calcareous materials
- ECedS - ECe (dS/m)
- ESP - ESP (%)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WHEATTemp

Wheat temp requirement for land evaluation

Description

A dataset containing the temp characteristics of the crop requirements for farming Wheat.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- TgAv - Mean temperature of the growing cycle (°C)
- TmAv2 - Mean temp. crop development stage (2nd month) (°C)
- TmAv3 - Mean temp. of the flowering stage (°C)
- TmAv4 - Mean temp. of the ripening stage (°C)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WHEATTerrain

Wheat terrain requirement for land evaluation

Description

A dataset containing the terrain characteristics of the crop requirements for farming Wheat.

Format

A data frame with 6 rows and 8 columns

Details

The following are the factors for evaluation:

- Slope1 - Slope (%) (1. Irrigated agriculture, basin furrow irrigation)
- Slope2 - Slope (%) (2. High level of managemnet with full mechanization.)
- Slope3 - Slope (%) (3. Low level of managemnet animal traction or handwork.)
- Flood - Flooding
- Drainage4 - Drainage (Medium and fine textured soils)
- Drainage5 - Drainage (Coarse textured soils - Sandy families)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

WHEATWater

Wheat water requirement for land evaluation

Description

A dataset containing the water characteristics of the crop requirements for farming Wheat.

Format

A data frame with 4 rows and 8 columns

Details

The following are the factors for evaluation:

- WgAv - Precipitation of growing cycle (mm)
- WmAv2 - Mean precipitation of second month (mm)
- WmAv3 - Mean precipitation of third month (mm)
- WmAv4 - Mean precipitation of fourth month (mm)

See Also

- Yen, B. T., Pheng, K. S., and Hoanh, C. T. (2006). *LUSET: Land Use Suitability Evaluation Tool User's Guide*. International Rice Research Institute.

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