KONZ Site: BigFoot Field Data Documentation

Contents:

2000 KONZ README DOCUMENT (konz_2000_README.txt)

BIGFOOT PROJECT - KONZ site (KONZA LTER) **********

- Samples were collected using 0.25 m2 rings

- All biomass values are in kg/ha

- Variable names followed by "_se" are standard errors of the mean

- There is no data yet for the two plots in the gallery forests (83,98).
  (Litter must be collected in 2001 for foliage estimates).

- Vegetation cover types will be included in October data set

- LAI was calculated using specific leaf area. Specific leaf area samples were collected from 5-6 major species groups present at the time of each sampling. Each sample was categorized by the major species present and the appropriate SLA was used.

********** June (6/6/00) **********
- 2nd order plots only

********** August (8/25/00) **********
- 2nd order plots only
- There is no data for the following plots at this time: 44,67,and 91

********** October () **********
- October data has not yet been processed.
- Data will be available for all 100 plots sometime in 2001

2000 KONZ FPAR LAI README DOCUMENT (konz_optical_lai_fpar_2000_README.txt)

BIGFOOT PROJECT - KONZ site (KONZA LTER) **********

- Data was collected during three sampling dates (JUNE, AUGUST, OCTOBER)

- In October, fpar measurements were only taken on the intensive (0-79) plots. Grasses had no functional leaf area in October. Therefore LAI values are not reported.

- Fpar was calculated using the LAI 2000 variable "difn". This variable indicates the fraction of sky that is not blocked by foliage. This values ranges from 0 to 1. We converted this value to reflect the amount of radiation intercepted by the foliage.

- The instrument used, LAI 2000, only measures short wave (<490 nm) radiation.

- Variable name 'se' is the standard error of the mean.

- There are several plots and subplots missing fpar and lai data. This is due to limitations associated with the instrumentation used (LAI 2000). There are differences in the sensitivity associated with each of the units. The sensitivity is variable depending on the production year of the particular unit. Trials were conducted at the end of the growing season and it was concluded that, below a particular light level, the unit was less sensitive. Data associated with this lower light level is compromised and is not being used.

- LAI reported is optical LAI using the LAI 2000.

2001 KONZ FPAR LAI README DOCUMENT (konz_optical_lai_fpar_2001_README.txt)

BIGFOOT PROJECT - KONZ site (KONZA LTER) **********

- Data was collected from June 18-22 and August 16-17, 2001

- Fpar was calculated using the LAI 2000 variable "difn". This variable indicates the fraction of sky that is not blocked by foliage. This values ranges from 0 to 1. We converted this value to reflect the amount of radiation intercepted by the foliage.

- The instrument used, LAI 2000, only measures short wave (<490 nm) radiation.

- Variable name 'se' is the standard error of the mean.

- There are several plots and subplots missing fpar and lai data. This is due to limitations associated with the instrumentation used (LAI 2000). There are differences in the sensitivity associated with each of the units. The sensitivity is variable depending on the production year of the particular unit. Trials were conducted at the end of the growing season and it was concluded that, below a particular light level, the unit was less sensitive. Data associated with this lower light level is compromised and is not being used.

- LAI reported is optical LAI using the LAI 2000.

****

2000 KONZ TISSUE NITROGEN README DOCUMENT
(konz_nitrogen_analysis_2000_README.txt)

TISSUE NITROGEN CONCENTRATION DATA FOR SELECTED PLANTS**********

General Comments:
- Tissues were dried to a constant mass at 70 C and ground.
- Samples were analyzed using the Kjeldahl digestion technique at the UW Soil and Plant Analysis Lab, Madison, WI.
- Values are reported in total percent nitrogen.

2000 KONZ ROOT BIOMASS README DOCUMENT (konz_roots_2000_README.txt)

BIGFOOT PROJECT - HARV site (HARVARD LTER)**********
ROOT BIOMASS/BNPP DATA

- A 4.45 cm-diameter soil core was collected from 7 locations within each plot on 8/00 and 5 locations on 11/00

- Area sampled = 15.55 cm2 per core, depth 50 cm

- The first 5 locations were the center and the 4 cardinal directions; the remaining two were from randomly assigned locations within the plot

- Samples were collected in August (max root growth) and November (min root growth)

- Below ground net primary production (BNPP) was calculated by subtracting min root growth from max root growth

- BNPP is in kg/ha

2000 KONZ TREE BIOMASS README DOCUMENT (konz_tree_biomass_2001.xls)

****

TREE BIOMASS AT KONZ (KONZA LTER) BIGFOOT PROJECT -AAK 2002

- Variables:

- basal = basal area in m2/ha
- TPH = trees per ha
- woodmass: wood mass (kg/ha/yr) (dry mass, not C)
- rootmass: coarse root mass (kg/ha/yr) (dry mass, not C) calculated from allometric equations
- leafdet01: deciduous foliage detritus (kg/ha/yr)
- [var]_se = standard errors of plot means for that variable

- Wood and root mass were estimated using published allometric equations relating wood and root biomass to stem diameter at breast height (DBH).

- Detritus was estimated using litterfall traps

- Tree diameters were collected using diameter tapes on 12/1/2002

- Sample trees within each subplot were selected using a horizontal variable radius plot technique (a prism). Scaling factors (BAF's) were selected to include approximately 10-12 trees within each subplot

- PLEASE CONTACT AL KIRSCHBAUM (aakirsch@facstaff.wisc.edu) FOR ADDITIONAL INFORMATION

****

2000 AND 2001 KONZ ANPP README DOCUMENT (konz_anpp_readme.txt)

BIGFOOT PROJECT - KONZ site (KONZA LTER) **********
********** ANPP 2000 & 2001 **********

- Samples were collected using 0.25 m2 rings

- All values are in kg/ha

- There is no data yet for the two plots in the gallery forests (83,98).
  (Litter must be collected for foliage estimates and trees need to cored)

- ANPP is broken down into three categories - grass, non_grass, & wood

- ANPP was calculated by taking the maximum value in each category across sampling dates

- contacts: Drew Feldkirchner dcfeldki@facstaff.wisc.edu
  Al Kirschbaum aakirsch@facstaff.wisc.edu

2000 AND 2001 KONZ TREE NPP README DOCUMENT
(konz_tree_npp_2000_2001_readme.txt)

****

TREE NET PRIMARY PRODUCTIVITY AT KONZ (KONZA LTER)
BIGFOOT PROJECT, AAK 2002

- Variables:

- basal = basal area in m2/ha
- TPH = trees per ha
- wdnpp_2001, wdnpp_2000: wood increment (kg/ha/yr) (dry mass, not C)
- leafdet01, leafdet00: deciduous foliage detritus (kg/ha/yr)
- rnpp2001, rnpp2000: coarse root growth (kg/ha/yr) (dry mass, not C) calculated from allometric equations
- [var]_se = standard errors of plot means for that variable

- ANPP can be calculated as follows:
Wood increment + foliage litterfall + coarse root growth

- Wood increment and root growth were estimated using published allometric equations relating wood and root biomass to stem diameter at breast height (DBH).

- Detritus was estimated using litterfall traps

- Tree diameters were collected using diameter tapes on 12/1/2002

- Sample trees within each subplot were selected using a horizontal variable radius plot technique (a prism). Scaling factors (BAF's) were selected to include approximately 10-12 trees within each subplot

- PLEASE CONTACT AL KIRSCHBAUM (aakirsch@facstaff.wisc.edu) FOR ADDITIONAL INFORMATION

****

README for bf_konz_lai_august_25-27_2000_x10_with_defaults.tif

This layer supercedes all versions released prior to Jan 01 2003

1. General Information
Theme: Land Cover in IGBP Units
Theme Date: august 25-27, 2000
Project: BigFoot
Site: KONZ (Kansas, USA)
Biome: Tallgrass prarie
Contact: Thomas.Maiersperger@orst.edu

2. Layer Information
Rows: 282
Cols: 282
Data Type: unsigned 8-bit thematic
Format: Geotiff

3. Map Information
ULX: 706548
ULY: 4332973
Pixel Size: 25
Units: meters
Projection: UTM
Spheroid: WGS84
Datum: WGS84
Zone: 14 North

4. Attribute Information
Pixel values are LAI estimates multiplied by 10 (e.g. a value of 55 = 5.5 LAI)

5. Additional Information
Some land classes were not modeled. For these pixels, default LAI values were inserted based on literature estimates or other information.

README for bf_konz_lai_june_6-8_2000_x10_with_defaults.tif

This layer supercedes all versions released prior to Jan 01 2003

1. General Information
Theme: Land Cover in IGBP Units
Theme Date: june 6-8, 2000
Project: BigFoot
Site: KONZ (Kansas, USA)
Biome: Tallgrass prarie
Contact: Thomas.Maiersperger@orst.edu

2. Layer Information
Rows: 282
Cols: 282
Data Type: unsigned 8-bit thematic
Format: Geotiff

3. Map Information
ULX: 706548
ULY: 4332973
Pixel Size: 25
Units: meters
Projection: UTM
Spheroid: WGS84
Datum: WGS84
Zone: 14 North

4. Attribute Information
Pixel values are LAI estimates multiplied by 10 (e.g. a value of 55 = 5.5 LAI)

5. Additional Information
Some land classes were not modeled. For these pixels, default LAI values were inserted based on literature estimates or other information.

README for bf_konz_lai_june_18-22_2001_x10_with_defaults.tif

This layer supercedes all versions released prior to Jan 01 2003

1. General Information
Theme: Land Cover in IGBP Units
Theme Date: june 18-22, 2001
Project: BigFoot
Site: KONZ (Kansas, USA)
Biome: Tallgrass prarie
Contact: Thomas.Maiersperger@orst.edu

2. Layer Information
Rows: 282
Cols: 282
Data Type: unsigned 8-bit thematic
Format: Geotiff

3. Map Information
ULX: 706548
ULY: 4332973
Pixel Size: 25
Units: meters
Projection: UTM
Spheroid: WGS84
Datum: WGS84
Zone: 14 North

4. Attribute Information
Pixel values are LAI estimates multiplied by 10 (e.g. a value of 55 = 5.5 LAI)

5. Additional Information
Some land classes were not modeled. For these pixels, default LAI values were inserted based on literature estimates or other information.

README for bf_konz_landcover_2000_igbp.tif

This layer supercedes all versions released prior to Jan 01 2003

1. General Information
Theme: Land Cover in IGBP Units
Theme Date: Year 2000
Project: BigFoot
Site: KONZ (Kansas, USA)
Biome: Tallgrass prarie
Contact: Thomas.Maiersperger@orst.edu

2. Layer Information
Rows: 282
Cols: 282
Data Type: unsigned 8-bit thematic
Format: Geotiff

3. Map Information
ULX: 706548
ULY: 4332973
Pixel Size: 25
Units: meters
Projection: UTM
Spheroid: WGS84
Datum: WGS84
Zone: 14 North

4. Attribute Information

Value	Class Name
4	Deciduous Broadleaf Forest
7	Open Shrubland
8	Woody Savanna
10	Grassland
12	Cropland
13	Urban/Built
17	Water