



# SMEX03 Vegetation Data: Alabama, Version 1

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## USER GUIDE

### How to Cite These Data

As a condition of using these data, you must include a citation:

Coleman, T., T. Tsegaye, R. MetzI, and M. Schamschula. 2008. SMEX03 Vegetation Data: Alabama, Version 1. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. <https://doi.org/10.5067/YVQTPSF4VZ9N>. [Date Accessed].

FOR QUESTIONS ABOUT THESE DATA, CONTACT [NSIDC@NSIDC.ORG](mailto:NSIDC@NSIDC.ORG)

FOR CURRENT INFORMATION, VISIT <https://nsidc.org/data/NSIDC-0348>



National Snow and Ice Data Center

# TABLE OF CONTENTS

|       |   |   |
|-------|---|---|
| 1     | DETAILED DATA DESCRIPTION.....            | 2 |
| 1.1   | Format .....                              | 2 |
| 1.2   | Spatial Coverage.....                     | 3 |
| 1.3   | Temporal Coverage.....                    | 3 |
| 1.3.1 | Temporal Resolution.....                  | 3 |
| 1.4   | Parameter or Variable .....               | 3 |
| 1.4.1 | Parameter Description .....               | 3 |
| 1.4.2 | Sample Data Record.....                   | 4 |
| 2     | DATA ACQUISITION AND PROCESSING.....      | 4 |
| 2.1   | Sensor or Instrument Description .....    | 4 |
| 3     | REFERENCES AND RELATED PUBLICATIONS ..... | 4 |
| 3.1   | Related Data Collections .....            | 4 |
| 3.2   | Related Websites .....                    | 5 |
| 4     | CONTACTS AND ACKNOWLEDGMENTS .....        | 5 |
| 5     | DOCUMENT INFORMATION.....                 | 5 |
| 5.1   | Publication Date .....                    | 5 |
| 5.2   | Date Last Updated.....                    | 6 |

# 1 DETAILED DATA DESCRIPTION

This data set includes vegetation data collected over the Soil Moisture Experiment 2003 (SMEX03) area of northern Alabama, USA.

Data are provided in an Excel file and as a separate tab-delimited ASCII text file. The text file contains the same data as the Excel file. Data that were not collected are shown as -99 in the data files.

## 1.1 Format

Table 1 Column Headings for AL\_SMEX03\_vegetation.txt and AL\_SMEX03\_vegetation.xls

| Column | Column Heading                                       | Description   |
|--------|--|---|
| 1      | Field  | Field ID  |
| 2      | Rep  | Sampling Site ID  |
| 3      | Crop   | Crop type   |
| 4      | Date (mm/dd/yyyy)                                    | Date as month/day/year  |
| 5      | DOY  | Day of year   |
| 6      | Time (CDT)   | Time in Central Daylight Time (CDT), notated with a decimal. The time recorded as 0.524305556, for example, is 12:35 p.m. (24 hrs x 0.524305556 = 12.58333344; 60 min x 0.58333344 = 35). |
| 7      | Team   | Collection team's name  |
| 8      | Latitude WGS84                                       | Latitude in decimal degrees   |
| 9      | Longitude WGS84                                      | Longitude in decimal degrees  |
| 10     | Plant Height (m)                                     | Plant height in meters  |
| 11     | Plant Phenology                                      | Plant phenology   |
| 12     | Number of Plants in 5 rows Per 1 meter               | Total number of plants in 5 rows per 1 meter along each row   |
| 13     | Stand Density (plants/m)                             | Number of plants per meter along each row   |
| 14     | Row Spacing (m)                                      | Row spacing in meters   |
| 15     | Row Direction  | Row direction: North/South or East/West   |
| 16     | Stand Density Per Unit Area (plants/m <sup>2</sup> ) | Plant stand density per meters squared  |
| 17     | Plant Mean Wet Biomass (kg)                          | Mean wet biomass of each plant in kilograms   |
| 18     | Plant Mean Dry Biomass (kg)                          | Mean dry biomass of each plant in kilograms   |

| Column | Column Heading                                 | Description                                |
|--------|--|--|
| 19     | Wet Biomass Per Unit Area (kg/m <sup>2</sup> ) | Wet biomass in kilograms per meter squared |
| 20     | Dry Biomass Per Unit Area (kg/m <sup>2</sup> ) | Dry biomass in kilograms per meter squared |

## 1.2 Spatial Coverage

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Southernmost Latitude: 34.68 ° N

Northernmost Latitude: 35.16 ° N

Westernmost Longitude: 87.07 ° W

Easternmost Longitude: 85.78 ° W

## 1.3 Temporal Coverage

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22 June 2003 to 1 July 2003

### 1.3.1 Temporal Resolution

Readings were taken once or twice for each of the sampling sites throughout the duration of the study.

## 1.4 Parameter or Variable

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### 1.4.1 Parameter Description

Table 2 describes the units of measurement and the collection source or calculation of each parameter.

Table 2 Parameter Descriptions

| Parameter                   | Unit of Measurement                               | Collection Source or Calculation   |
|-----------------------------|---|--|
| Plant Height                | Meters (m)  | Manual data collection   |
| Plant Phenology             | Plant and leaf structure                          | Manual data collection   |
| Stand Density               | Plants per meter (plants/m)                       | The number of plants per 1 meter along each row                            |
| Row Spacing                 | Meters (m)  | Manual data collection   |
| Row Direction               | N/S or E/W  | Manual data collection   |
| Stand Density Per Unit Area | Plants per meter squared (plants/m <sup>2</sup> ) | The total number of plants in 5 rows divided by the area of 4 row spacings |

| Parameter                 | Unit of Measurement                              | Collection Source or Calculation   |
|---------------------------|--|--|
| Plant Mean Wet Biomass    | Kilograms (kg)                                   | Manual data collection   |
| Plant Mean Dry Biomass    | Kilograms (kg)                                   | Manual data collection   |
| Wet Biomass Per Unit Area | Kilograms per meter squared (kg/m <sup>2</sup> ) | The plant mean wet biomass multiplied by the stand density per unit area |
| Dry Biomass Per Unit Area | Kilograms per meter squared (kg/m <sup>2</sup> ) | The plant mean dry biomass multiplied by the stand density per unit area |

### 1.4.2 Sample Data Record

A sample file of this data set is shown in Figure 1. The first four columns and the last two columns of the first four rows of AL\_SMEX03\_vegetation.txt are displayed. The Excel file AL\_SMEX03\_vegetation.xls contains the same data as AL\_SMEX03\_vegetation.txt.

| Field | Rep | Crop | Date      | ... | Wet Biomass Per Unit Area | Dry Biomass Per Unit Area |
|-------|-----|------|-----------|-----|---------------------------|---------------------------|
| AL 1  | A   | Corn | 6/22/2003 | ... | 0.05446                   | 0.00787                   |
| AL 1  | B   | Corn | 6/22/2003 | ... | 0.07524                   | 0.01050                   |
| AL 1  | C   | Corn | 6/22/2003 | ... | 0.04659                   | 0.00591                   |
| AL 1  | A   | Corn | 7/1/2003  | ... | 0.15568                   | 0.01848                   |

Figure 1 Sample Data Record

## 2 DATA ACQUISITION AND PROCESSING

### 2.1 Sensor or Instrument Description

A balance was used to weigh plant samples, a measuring tape to measure their length, and an oven to dry them.

## 3 REFERENCES AND RELATED PUBLICATIONS

Coleman, T., T. Tsegaye, R. MetzI, and M. Schamschula. 2008. SMEX03 Vegetation Data: Alabama. [indicate subset used]. Boulder, Colorado USA: NASA National Snow and Ice Data Center Distributed Active Archive Center. doi: <http://dx.doi.org/10.5067/YVQTPSF4VZ9N>.

### 3.1 Related Data Collections

[AMSR-E/Aqua Data at NSIDC](#): AMSR-E standard products available at NSIDC.

## 3.2 Related Websites

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Please visit the [USDA SMEX03](#) Web site for in-depth information on the science mission and goal of the SMEX project.

# 4 CONTACTS AND ACKNOWLEDGMENTS

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# 5 DOCUMENT INFORMATION

## 5.1 Publication Date

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5 June 2008

## 5.2 Date Last Updated

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