



Ground measurement acquisition report for the VALERI site **Sud-Ouest**

sampled from 07/07/2002 to 08/07/2002

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People participating to the field experiment:

Fistname & Name	Organization
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Phillippe Maisongrande	CESBIO, Toulouse, France
Guillaume Maubert	CESBIO, Toulouse, France
Ignacio Tourino Soto	ESAT, Toulouse, France
Etienne Voisin	CESBIO, Toulouse, France

Site coordinates

	Lat-Long WGS84 (Deg min.00)		UTM / WGS84 UTM 31T		Other projection*	
	Lat.	Long.	Easting	Northing	east	north
Upper left corner	43.31	1.13	356002.44	4820075.31	509460	1835940
Lower right corner	43.29	1.152	359042.44	4817035.31	512460	1832940

*The other projection user is *Lambert II etendu* . All the characteristics are provided in the following table (see <http://www.avignon.inra.fr/valeri/>, methodology page, GPS document for more information):

Geodesic Map Datum : NTF		Map Projection:Lambert II etendu	
Associated Ellipsoid	Clarke 1980 IGN	Application zone	France
Semi-major axe	6378249.2	Latitude of origin	44°48'N
Semi-minor axe	6356515.0	Longitude of origin Parallels 1 st 2 nd	2°20'14.025'' (Paris) 45°53'56.108'' 47°41'45.652''
1/flattening	293.466021		
Eccentricity	0.08248325676		
		Xo: false easting	600 000m
		Yo: false northing	2 200 000m
		Scale factor	1

Ground control points

The Excel file GPSSudOuest2002.xls contains different waypoints (UTM/WGS84) acquired on the site:

GCP1	358240	4817743	La Mothe, road intersection
GCP2	356129	4819092	d12 and d82 road intersection
GCP4	358397	4818317	d12 and d50 road intersection
GCP5	356796	4819723	GCP, road and bridge intersection
GCP9	358039	4817705	La Mothe farm

GPS system used: : Garmin etrex (team B) and MLR modèle SP 24 XC (teamA)
Typical uncertainty of GPS position: 7 m

Description of the site and land cover

Site Size:

The site size is 3040m*30420m (152 SPOT pixels*152 SPOT pixels).

Category according to IGBP classification

Croplands

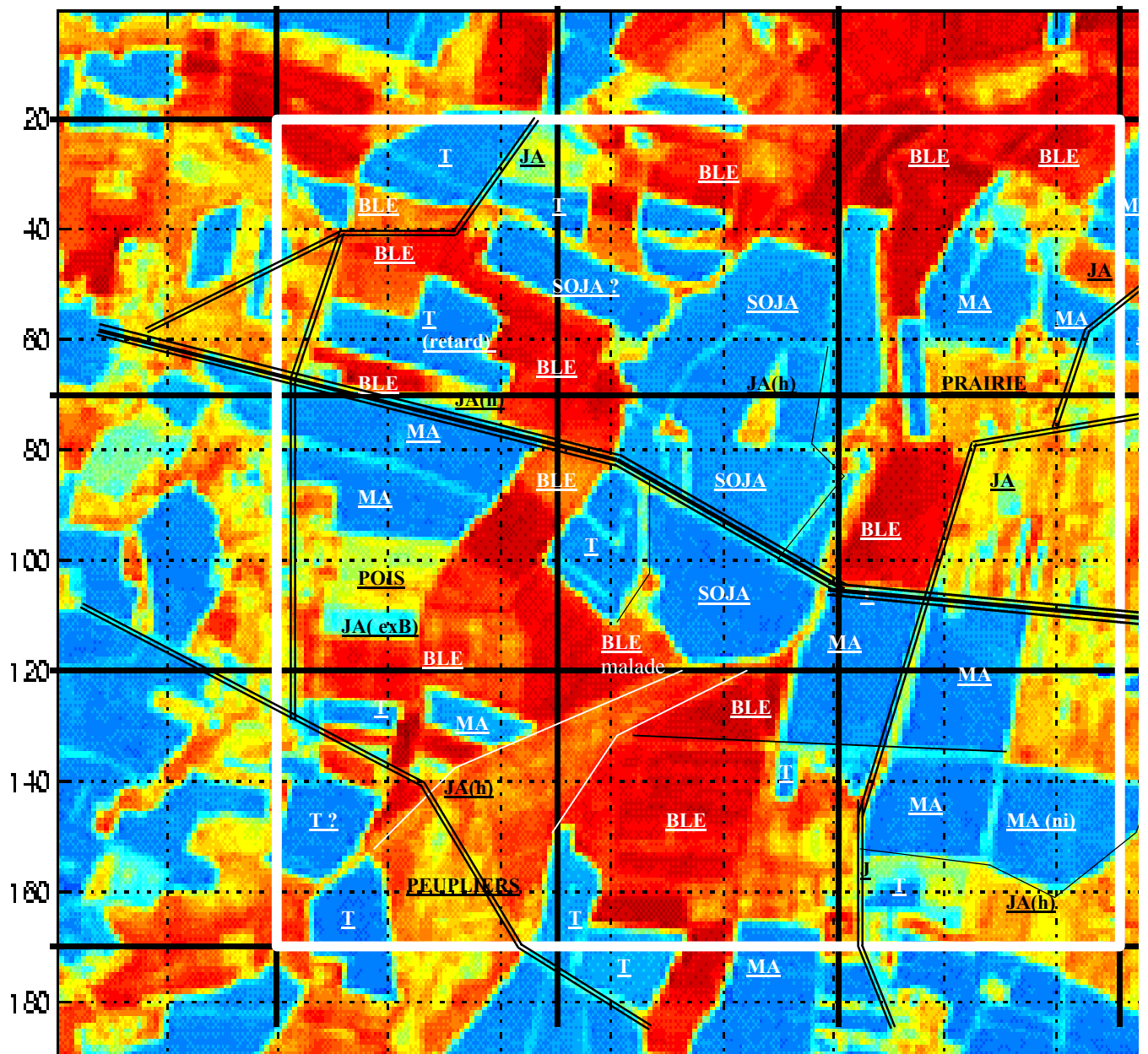
Comments on the land cover

The land cover is composed mainly of: crops (corn, soyabean, sunflower) and grasslands. The fields have quite important size. The mean field size is about 15-20 ha

Topography

The site is at about 170 m altitude. It is generally quite flat.

Land cover map



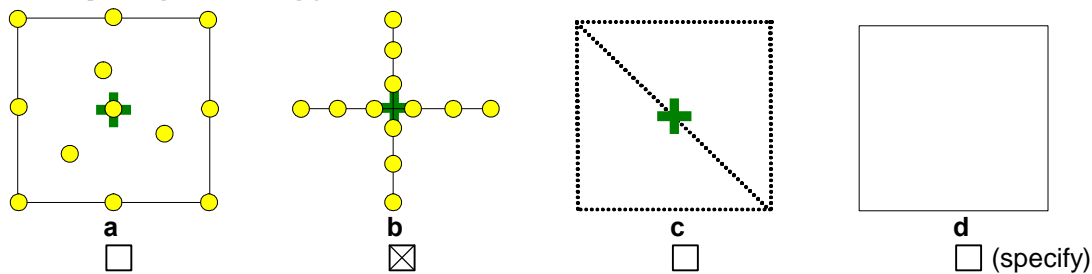
<u>Legend:</u>	
BLE : Wheat	Peupliers: poplar
T : Sunflower	Retard: late
JA : fallow	Ma:Maize
Prairie:Grassland	

Spatial Sampling scheme

Sensors used for sampling the ESUs

	Method	Comments
<input checked="" type="checkbox"/>	Hemispherical photographs	
<input type="checkbox"/>	LAI2000	
<input type="checkbox"/>	TRAC	
<input type="checkbox"/>	Ceptometer	
<input type="checkbox"/>	Direct measurements	
<input type="checkbox"/>	Other	

Sampling strategy for the ESU



Distribution of the Elementary sampling units

The crosses distribution was used.

The high spatial resolution image

Satellite

Satellite used SPOT2 HRV1
 Level of processing 2B, SPOTView basic
 Projection type UTM, zone 31, WGS84

Georeferencing comment (accuracy, waypoint validation ...):

Comments: Different image are available (please contact the person in charge with site):

- A 5*5 km SPOT image (*SPOTSudOuest020720_5x5km.tif*) centered on the site (UTM, 31T, WGS84)
- A 3*3km SPOT image (*SPOTSudOuest020720_3x3km.tif*) (UTM, zone 31, WGS84)

Acquisition Date:

List of the ESUs

A GPS file (Excel file GPSSudOuest2002.xls) presents the list of the ESUS with different informations:

- ESU number (AXX or BXX, A and B are the team name)
- Month
- Day
- Hour
- Minute
- Pixel-id: the pixel (1km*1km of the 3km*3km site) number where the ESU falls.
- Easting
- Northing
- Latitude (same reference system than cartographic coordinate)
- Longitude
- Altitude
- GPS accuracy indicator (Hdop (m) or satellite number)
- 1st photo number: file number XXXX (of DSCNXXXX.JPG) of the ESU 1st hemispherical photo
- last photo number: file number (XXXX of DSCNXXXX.JPG) of the ESU last hemispherical photo
- total number of hemispherical photos
- crop type
- comments

easting(utm)	northing(utm)	crop_type	Comments on the vegetation status, condition of acquisitions, etc...
358240	4817743		La Mothe, road intersection
356129	4819092		d12 and d82 road intersection
358397	4818317		d12 and d50 road intersection
356796	4819723		GCP, road and bridge intersection
349026,71	4797106,73		road intersection, validity ??
348744,9	4796514,1		road intersection, validity ??
348426,96	4796846,79		road intersection, validity ??
358039	4817705		La Mothe house
356002,44	4820075,31		
359042,44	4817035,31		
358224	4818212	irrigated corn	
358305	4817664	irrigated corn	
358709	4817548	corn	small
357978	4819316	irrigated soya bean	irrigated on the day
357915	4818670	soya bean	row spacing =70cm, non irrigated
356397	4818903	irrigated corn	h=2.2<m, 12 leaves, row spacing=75cm
356556	4818644	irrigated corn	row spacing=75cm,h=2.10m
356315	4819286	sunflower	non irrigated , h=50cm,row spacing=80cm, irregular size
357291	4818432	sunflower	
357633	4818366	soya bean	
357605	4818165	soya bean	narrow field
357242	4818656	sunflower	small, young
357288	4817729	woodland	very developed understorey
358403	4817257	fallow	very heterogeneous, with different phenological states
358701	4818684	fallow	
356250	4819721	non irrigated corn	row spacing=75cm, h=40cm, weed on the floor
356150	4818232	cut grassland	presence of haystacks
356298	4817878	sunflower	1.80m, row spacing=70 cm
356265	4817555	irrigated corn	
356892	4817285	peuplier	h=7m,row spacing=7m, ploughland, weed
357036	4817077	young soyabean	non irrigated
356758	4819976	soya bean	not in flower
358668	4819433	corn	changing irradiance conditions for the photos
358842	4819547	fallow	heterogeneous, different phenological states (green, yellow)
357897	4817866	corn	irrigated, h=1.80 m, homogeneous, row spacing=70cm
358796	4819737	grassland	close to the woodland, short cut grass
358559	4819053	grassland	neighbouring houses, very short grass, different phenological states
358706	4819620	corn	narrow field
357219	4819461	corn	homogeneous, height=1.9m, some clouds
357474	4819513	sunflower	late development, heterogeneous, very variable height

Acknowledgements

Thanks to all the persons who participated to the field experiment. Thanks to the Ferme de Purpan LaMothe (**Daniel Bataille**), Sud-Ouest farmers(Mr Eric Jean-Pierre ...) for their friendly welcome.

Photo gallery

#	File name	Comments
1	Teama.jpg	Team action
2	Afterlunch.jpg	Team after lunch
3	Cesbioteam.jpg	Team Picture
4	Tracteur.JPG	Team Picture
5	Siesta.JPG	Siesta after lunch
6	restau.JPG	SudOuest Restaurant

Additional comments

A very pleasant campaign !!