

Table S1. RSD Landsat for study area found in the archives.

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
1	LT05_19840424_173026	277	LT05_20010712_173026
2	LT05_19840510_173026	278	LT05_20010728_173026
3	LT05_19840526_173026	279	LE07_20010805_173026
4	LT05_19840627_173026	280	LT05_20010813_173026
5	LT05_19840830_173026	281	LE07_20010821_173026
6	LT05_19850310_173026	282	LE07_20010922_173026
7	LT05_19850513_173026	283	LE07_20011008_173026
8	LT05_19850529_173026	284	LE07_20011109_173026
9	LT05_19850614_173026	285	LE07_20011125_173026
10	LT05_19850630_173026	286	LT05_20011203_173026
11	LT05_19850716_173026	287	LE07_20011211_173026
12	LT05_19850801_173026	288	LE07_20011227_173026
13	LT05_19850817_173026	289	LT05_20020104_173026
14	LT05_19850918_173026	290	LE07_20020128_173026
15	LT05_19851020_173026	291	LT05_20020221_173026
16	LT05_19851105_173026	292	LT05_20020309_173026
17	LT05_19851121_173026	293	LE07_20020317_173026
18	LT05_19860108_173026	294	LT05_20020325_173026
19	LT05_19860313_173026	295	LT05_20020426_173026
20	LT05_19860329_173026	296	LE07_20020520_173026
21	LT05_19860414_173026	297	LT05_20020613_173026
22	LT05_19860430_173026	298	LE07_20020621_173026
23	LT05_19860516_173026	299	LT05_20020629_173026
24	LT05_19860601_173026	300	LE07_20020707_173026
25	LT05_19860617_173026	301	LE07_20020824_173026
26	LT05_19860703_173026	302	LE07_20020909_173026
27	LT05_19860719_173026	303	LE07_20020925_173026
28	LT05_19860804_173026	304	LE07_20021011_173026
29	LT05_19860820_173026	305	LE07_20021027_173026
30	LT05_19861007_173026	306	LE07_20021214_173026
31	LT05_19861023_173026	307	LE07_20030216_173026
32	LT05_19861108_173026	308	LE07_20030304_173026
33	LT05_19861210_173026	309	LE07_20030421_173026
34	LT05_19870111_173026	310	LE07_20030507_173026
35	LT05_19870212_173026	311	LE07_20030523_173026
36	LT05_19870316_173026	312	LT05_20030718_173026
37	LT05_19870401_173026	313	LT05_20030803_173026
38	LT05_19870503_173026	314	LT05_20030819_173026
39	LT05_19870519_173026	315	LT05_20030904_173026
40	LT05_19870706_173026	316	LT05_20030920_173026
41	LT05_19870807_173026	317	LT05_20040126_173026
42	LT05_19870823_173026	318	LT05_20040211_173026
43	LT05_19870908_173026	319	LT05_20040618_173026

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
44	LT05_19871010_173026	320	LT05_20040704_173026
45	LT05_19871026_173026	321	LT05_20040720_173026
46	LT05_19871111_173026	322	LT05_20040805_173026
47	LT05_19871127_173026	323	LT05_20040821_173026
48	LT04_19871205_173026	324	LT05_20040922_173026
49	LT05_19871213_173026	325	LT05_20041211_173026
50	LT05_19880130_173026	326	LT05_20050213_173026
51	LT05_19880215_173026	327	LT05_20050301_173026
52	LT05_19880505_173026	328	LT05_20050317_173026
53	LT05_19880606_173026	329	LT05_20050504_173026
54	LT04_19880614_173026	330	LT05_20050605_173026
55	LT05_19880622_173026	331	LT05_20050808_173026
56	LT04_19880630_173026	332	LT05_20050824_173026
57	LT05_19880708_173026	333	LT05_20050909_173026
58	LT04_19880716_173026	334	LT05_20050925_173026
59	LT05_19880724_173026	335	LT05_20060405_173026
60	LT04_19880801_173026	336	LT05_20060421_173026
61	LT05_19880809_173026	337	LT05_20060507_173026
62	LT04_19880817_173026	338	LT05_20060523_173026
63	LT05_19880825_173026	339	LT05_20060608_173026
64	LT05_19880910_173026	340	LT05_20060624_173026
65	LT05_19881012_173026	341	LT05_20060710_173026
66	LT04_19881020_173026	342	LT05_20060726_173026
67	LT05_19881028_173026	343	LT05_20060811_173026
68	LT04_19881105_173026	344	LT05_20060827_173026
69	LT05_19881113_173026	345	LT05_20060912_173026
70	LT05_19881129_173026	346	LT05_20060928_173026
71	LT05_19881231_173026	347	LT05_20061014_173026
72	LT05_19890321_173026	348	LT05_20070102_173026
73	LT05_19890406_173026	349	LT05_20070118_173026
74	LT05_19890422_173026	350	LT05_20070203_173026
75	LT05_19890508_173026	351	LT05_20070323_173026
76	LT05_19890524_173026	352	LT05_20070526_173026
77	LT05_19890609_173026	353	LT05_20070611_173026
78	LT05_19890625_173026	354	LT05_20070713_173026
79	LT04_19890703_173026	355	LT05_20070729_173026
80	LT05_19890711_173026	356	LT05_20070814_173026
81	LT04_19890719_173026	357	LT05_20070830_173026
82	LT04_19890804_173026	358	LT05_20070915_173026
83	LT05_19890812_173026	359	LT05_20071001_173026
84	LT04_19890820_173026	360	LT05_20080309_173026
85	LT05_19890828_173026	361	LT05_20080731_173026
86	LT04_19890905_173026	362	LT05_20080816_173026
87	LT04_19890921_173026	363	LT05_20080901_173026
88	LT05_19890929_173026	364	LT05_20090312_173026

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
89	LT05_19891015_173026	365	LT05_20090429_173026
90	LT05_19891031_173026	366	LT05_20090515_173026
91	LT05_19891116_173026	367	LT05_20090531_173026
92	LT05_19900220_173026	368	LT05_20090616_173026
93	LT05_19900308_173026	369	LT05_20090702_173026
94	LT05_19900324_173026	370	LT05_20090718_173026
95	LT05_19900409_173026	371	LT05_20090803_173026
96	LT05_19900511_173026	372	LT05_20090819_173026
97	LT05_19900612_173026	373	LT05_20090920_173026
98	LT05_19900714_173026	374	LT05_20091006_173026
99	LT05_19900730_173026	375	LT05_20091022_173026
100	LT05_19900815_173026	376	LT05_20091209_173026
101	LT05_19900916_173026	377	LT05_20100126_173026
102	LT05_19901221_173026	378	LT05_20100211_173026
103	LT05_19910223_173026	379	LT05_20100227_173026
104	LT05_19910412_173026	380	LT05_20100315_173026
105	LT05_19910428_173026	381	LT05_20100416_173026
106	LT05_19910514_173026	382	LT05_20100502_173026
107	LT05_19910530_173026	383	LT05_20100518_173026
108	LT05_19910615_173026	384	LT05_20100603_173026
109	LT05_19910701_173026	385	LT05_20100619_173026
110	LT05_19910717_173026	386	LT05_20100705_173026
111	LT05_19910802_173026	387	LT05_20100721_173026
112	LT05_19910818_173026	388	LT05_20100806_173026
113	LT05_19910903_173026	389	LT05_20100822_173026
114	LT05_19910919_173026	390	LT05_20100907_173026
115	LT05_19911005_173026	391	LT05_20100923_173026
116	LT05_19911021_173026	392	LT05_20101009_173026
117	LT05_19911106_173026	393	LT05_20101025_173026
118	LT05_19920329_173026	394	LT05_20101110_173026
119	LT05_19920414_173026	395	LT05_20101126_173026
120	LT05_19920617_173026	396	LT05_20110302_173026
121	LT04_19920625_173026	397	LT05_20110403_173026
122	LT04_19920711_173026	398	LT05_20110419_173026
123	LT05_19920804_173026	399	LT05_20110505_173026
124	LT05_19920820_173026	400	LT05_20110521_173026
125	LT05_19920905_173026	401	LT05_20110606_173026
126	LT05_19921007_173026	402	LT05_20110622_173026
127	LT05_19921124_173026	403	LT05_20110708_173026
128	LT05_19930127_173026	404	LT05_20110724_173026
129	LT05_19930212_173026	405	LT05_20110809_173026
130	LT05_19930401_173026	406	LT05_20110825_173026
131	LT05_19930503_173026	407	LT05_20110910_173026
132	LT05_19930604_173026	408	LC08_20130326_173026
133	LT05_19930620_173026	409	LC08_20130424_173026

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
134	LT05_19930706_173026	410	LC08_20130611_173026
135	LT05_19930722_173026	411	LC08_20130627_173026
136	LT05_19930807_173026	412	LC08_20130713_173026
137	LT05_19930823_173026	413	LC08_20130729_173026
138	LT05_19930908_173026	414	LC08_20130814_173026
139	LT05_19930924_173026	415	LC08_20130830_173026
140	LT05_19931010_173026	416	LC08_20130915_173026
141	LT05_19931111_173026	417	LC08_20131001_173026
142	LT05_19931127_173026	418	LC08_20131017_173026
143	LT05_19940215_173026	419	LC08_20131102_173026
144	LT05_19940319_173026	420	LC08_20140121_173026
145	LT05_19940404_173026	421	LC08_20140222_173026
146	LT05_19940420_173026	422	LC08_20140310_173026
147	LT05_19940506_173026	423	LC08_20140326_173026
148	LT05_19940522_173026	424	LC08_20140411_173026
149	LT05_19940623_173026	425	LC08_20140427_173026
150	LT05_19940709_173026	426	LC08_20140513_173026
151	LT05_19940725_173026	427	LC08_20140529_173026
152	LT05_19940810_173026	428	LC08_20140614_173026
153	LT05_19940826_173026	429	LC08_20140630_173026
154	LT05_19940911_173026	430	LC08_20140716_173026
155	LT05_19940927_173026	431	LC08_20140801_173026
156	LT05_19941013_173026	432	LC08_20140817_173026
157	LT05_19941029_173026	433	LC08_20140902_173026
158	LT05_19941114_173026	434	LC08_20140918_173026
159	LT05_19950117_173026	435	LC08_20141004_173026
160	LT05_19950407_173026	436	LC08_20141020_173026
161	LT05_19950423_173026	437	LC08_20141105_173026
162	LT05_19950509_173026	438	LC08_20141121_173026
163	LT05_19950525_173026	439	LC08_20141207_173026
164	LT05_19950610_173026	440	LC08_20150108_173026
165	LT05_19950626_173026	441	LC08_20150124_173026
166	LT05_19950712_173026	442	LC08_20150225_173026
167	LT05_19950728_173026	443	LC08_20150313_173026
168	LT05_19950813_173026	444	LC08_20150414_173026
169	LT05_19950829_173026	445	LC08_20150430_173026
170	LT05_19950914_173026	446	LC08_20150516_173026
171	LT05_19950930_173026	447	LC08_20150601_173026
172	LT05_19951016_173026	448	LC08_20150617_173026
173	LT05_19951203_173026	449	LC08_20150703_173026
174	LT05_19960324_173026	450	LC08_20150719_173026
175	LT05_19960409_173026	451	LC08_20150804_173026
176	LT05_19960425_173026	452	LC08_20150820_173026
177	LT05_19960511_173026	453	LC08_20150905_173026
178	LT05_19960527_173026	454	LC08_20150921_173026

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
179	LT05_19960612_173026	455	LC08_20151007_173026
180	LT05_19960628_173026	456	LC08_20151108_173026
181	LT05_19960714_173026	457	LC08_20151124_173026
182	LT05_19960730_173026	458	LC08_20151210_173026
183	LT05_19960815_173026	459	LC08_20160111_173026
184	LT05_19960831_173026	460	LC08_20160331_173026
185	LT05_19960916_173026	461	LC08_20160502_173026
186	LT05_19961002_173026	462	LC08_20160518_173026
187	LT05_19961018_173026	463	LC08_20160603_173026
188	LT05_19970207_173026	464	LC08_20160619_173026
189	LT05_19970311_173026	465	LC08_20160705_173026
190	LT05_19970428_173026	466	LC08_20160721_173026
191	LT05_19970514_173026	467	LC08_20160806_173026
192	LT05_19970530_173026	468	LC08_20160822_173026
193	LT05_19970615_173026	469	LC08_20160907_173026
194	LT05_19970701_173026	470	LC08_20160923_173026
195	LT05_19970802_173026	471	LC08_20161009_173026
196	LT05_19970818_173026	472	LC08_20161025_173026
197	LT05_19970903_173026	473	LC08_20161126_173026
198	LT05_19971005_173026	474	LC08_20170129_173026
199	LT05_19971106_173026	475	LC08_20170214_173026
200	LT05_19980125_173026	476	LC08_20170302_173026
201	LT05_19980226_173026	477	LC08_20170318_173026
202	LT05_19980330_173026	478	LC08_20170403_173026
203	LT05_19980415_173026	479	LC08_20170505_173026
204	LT05_19980501_173026	480	LC08_20170521_173026
205	LT05_19980517_173026	481	LC08_20170606_173026
206	LT05_19980602_173026	482	LC08_20170622_173026
207	LT05_19980618_173026	483	LC08_20170708_173026
208	LT05_19980704_173026	484	LC08_20170724_173026
209	LT05_19980720_173026	485	LC08_20170809_173026
210	LT05_19980805_173026	486	LC08_20170825_173026
211	LT05_19980821_173026	487	LC08_20170910_173026
212	LT05_19980906_173026	488	LC08_20170926_173026
213	LT05_19980922_173026	489	LC08_20171012_173026
214	LT05_19981008_173026	490	LC08_20171113_173026
215	LT05_19981024_173026	491	LC08_20180116_173026
216	LT05_19981109_173026	492	LC08_20180217_173026
217	LT05_19981125_173026	493	LC08_20180406_173026
218	LT05_19981227_173026	494	LC08_20180422_173026
219	LT05_19990112_173026	495	LC08_20180508_173026
220	LT05_19990128_173026	496	LC08_20180524_173026
221	LT05_19990317_173026	497	LC08_20180609_173026
222	LT05_19990418_173026	498	LC08_20180625_173026
223	LT05_19990504_173026	499	LC08_20180711_173026

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
224	LT05_19990605_173026	500	LC08_20180727_173026
225	LT05_19990621_173026	501	LC08_20180812_173026
226	LT05_19990707_173026	502	LC08_20180828_173026
227	LE07_19990715_173026	503	LC08_20180913_173026
228	LT05_19990723_173026	504	LC08_20180929_173026
229	LE07_19990731_173026	505	LC08_20181015_173026
230	LT05_19990808_173026	506	LC08_20181031_173026
231	LE07_19990816_173026	507	LC08_20181116_173026
232	LT05_19990824_173026	508	LC08_20181218_173026
233	LE07_19990901_173026	509	LC08_20190204_173026
234	LT05_19990909_173026	510	LC08_20190220_173026
235	LE07_19990917_173026	511	LC08_20190308_173026
236	LT05_19990925_173026	512	LC08_20190324_173026
237	LE07_19991003_173026	513	LC08_20190409_173026
238	LT05_19991011_173026	514	LC08_20190425_173026
239	LE07_19991104_173026	515	LC08_20190511_173026
240	LT05_19991128_173026	516	LC08_20190527_173026
241	LE07_19991206_173026	517	LC08_20190612_173026
242	LT05_19991230_173026	518	LC08_20190628_173026
243	LE07_20000107_173026	519	LC08_20190714_173026
244	LT05_20000115_173026	520	LC08_20190730_173026
245	LE07_20000123_173026	521	LC08_20190815_173026
246	LE07_20000224_173026	522	LC08_20190831_173026
247	LT05_20000303_173026	523	LC08_20190916_173026
248	LE07_20000311_173026	524	LC08_20191002_173026
249	LE07_20000428_173026	525	LC08_20191018_173026
250	LT05_20000506_173026	526	LC08_20191103_173026
251	LE07_20000530_173026	527	LC08_20200207_173026
252	LE07_20000615_173026	528	LC08_20200310_173026
253	LE07_20000701_173026	529	LC08_20200326_173026
254	LT05_20000709_173026	530	LC08_20200513_173026
255	LE07_20000717_173026	531	LC08_20200529_173026
256	LT05_20000725_173026	532	LC08_20200614_173026
257	LE07_20000802_173026	533	LC08_20200630_173026
258	LT05_20000810_173026	534	LC08_20200716_173026
259	LE07_20000818_173026	535	LC08_20200817_173026
260	LT05_20000826_173026	536	LC08_20200902_173026
261	LE07_20000903_173026	537	LC08_20200918_173026
262	LT05_20000911_173026	538	LC08_20201004_173026
263	LE07_20001005_173026	539	LC08_20201020_173026
264	LT05_20001013_173026	540	LC08_20201121_173026
265	LT05_20001029_173026	541	LC08_20201207_173026
266	LT05_20001114_173026	542	LC08_20210108_173026
267	LE07_20001208_173026	543	LC08_20210313_173026
268	LE07_20010125_173026	544	LC08_20210329_173026

	Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)
269	LT05_20010218_173026	545	LC08_20210414_173026
270	LE07_20010330_173026	546	LC08_20210430_173026
271	LE07_20010415_173026	547	LC08_20210516_173026
272	LE07_20010501_173026	548	LC08_20210601_173026
273	LT05_20010509_173026	549	LC08_20210617_173026
274	LE07_20010517_173026	550	LC08_20210703_173026
275	LT05_20010525_173026	551	LC08_20210719_173026
276	LE07_20010704_173026		

Table S2. RSD Landsat list of GIS project and acceptance sample.

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
1	y1985_0817_LT05_173026	68	y2002_0426_LT05_173026
2	y1985_1105_LT05_173026	69	y2002_0621_LE07_173026
3	y1986_0329_LT05_173026	70	y2003_0507_LE07_173026
4	y1986_0430_LT05_173026	71	y2003_0523_LE07_173026
5	y1986_0516_LT05_173026	72	y2004_0618_LT05_173026
6	y1986_0601_LT05_173026	73	y2005_0808_LT05_173026
7	y1986_1023_LT05_173026	74	y2005_0909_LT05_173026
8	y1987_0807_LT05_173026	75	y2005_0925_LT05_173026
9	y1987_1010_LT05_173026	76	y2006_0827_LT05_173026
10	y1987_1026_LT05_173026	77	y2006_0912_LT05_173026
11	y1988_0630_LT04_173026	78	y2006_0928_LT05_173026
12	y1988_0801_LT04_173026	79	y2007_0526_LT05_173026
13	y1988_0825_LT05_173026	80	y2007_0713_LT05_173026
14	y1988_1012_LT05_173026	81	y2007_1001_LT05_173026
15	y1988_1028_LT05_173026	82	y2009_0702_LT05_173026
16	y1989_0321_LT05_173026	83	y2010_0502_LT05_173026
17	y1989_0406_LT05_173026	84	y2010_0619_LT05_173026
18	y1989_0422_LT05_173026	85	y2010_0806_LT05_173026
19	y1989_0609_LT05_173026	86	y2010_0822_LT05_173026
20	y1989_0719_LT04_173026	87	y2010_0923_LT05_173026
21	y1989_0804_LT04_173026	88	y2010_1025_LT05_173026
22	y1989_0812_LT05_173026	89	y2011_0419_LT05_173026
23	y1989_0820_LT04_173026	90	y2011_0606_LT05_173026
24	y1989_0828_LT05_173026	91	y2011_0708_LT05_173026
25	y1989_1015_LT05_173026	92	y2011_0809_LT05_173026
26	y1990_0324_LT05_173026	93	y2013_0424_LC08_173026
27	y1990_0714_LT05_173026	94	y2013_0611_LC08_173026
28	y1990_0815_LT05_173026	95	y2013_0713_LC08_173026
29	y1991_0903_LT05_173026	96	y2013_1102_LC08_173026
30	y1991_1021_LT05_173026	97	y2014_0427_LC08_173026
31	y1992_0804_LT05_173026	98	y2014_0630_LC08_173026
32	y1992_0905_LT05_173026	99	y2014_0801_LC08_173026
33	y1993_0722_LT05_173026	100	y2014_0817_LC08_173026
34	y1993_0807_LT05_173026	101	y2014_0902_LC08_173026
35	y1993_0924_LT05_173026	102	y2014_0918_LC08_173026
36	y1993_1111_LT05_173026	103	y2014_1004_LC08_173026
37	y1994_0404_LT05_173026	104	y2014_1121_LC08_173026
38	y1995_0525_LT05_173026	105	y2015_0414_LC08_173026
39	y1995_0610_LT05_173026	106	y2015_0804_LC08_173026
40	y1995_0626_LT05_173026	107	y2015_0905_LC08_173026
41	y1995_0914_LT05_173026	108	y2016_1025_LC08_173026
42	y1995_1016_LT05_173026	109	y2017_0403_LC08_173026
43	y1996_0714_LT05_173026	110	y2017_0505_LC08_173026

Landsat scene (year_month day_satellite_path row)		Landsat scene (year_month day_satellite_path row)	
44	y1996_0815_LT05_173026	111	y2017_0606_LC08_173026
45	y1996_1018_LT05_173026	112	y2017_0809_LC08_173026
46	y1997_0514_LT05_173026	113	y2017_0910_LC08_173026
47	y1998_0501_LT05_173026	114	y2018_0406_LC08_173026
48	y1998_0720_LT05_173026	115	y2018_0524_LC08_173026
49	y1998_0821_LT05_173026	116	y2018_0609_LC08_173026
50	y1998_1008_LT05_173026	117	y2018_0711_LC08_173026
51	y1999_0317_LT05_173026	118	y2018_0727_LC08_173026
52	y1999_0418_LT05_173026	119	y2018_0812_LC08_173026
53	y1999_0605_LT05_173026	120	y2018_0828_LC08_173026
54	y1999_0808_LT05_173026	121	y2018_0913_LC08_173026
55	y1999_0816_LE07_173026	122	y2018_1015_LC08_173026
56	y2000_0530_LE07_173026	123	y2019_0425_LC08_173026
57	y2000_0615_LE07_173026	124	y2019_0511_LC08_173026
58	y2000_0717_LE07_173026	125	y2019_0815_LC08_173026
59	y2000_0810_LT05_173026	126	y2019_0916_LC08_173026
60	y2000_1013_LT05_173026	127	y2020_0326_LC08_173026
61	y2001_0517_LE07_173026	128	y2020_0716_LC08_173026
62	y2001_0525_LT05_173026	129	y2020_0817_LC08_173026
63	y2001_0728_LT05_173026	130	y2020_0902_LC08_173026
64	y2001_0805_LE07_173026	131	y2020_0918_LC08_173026
65	y2001_0813_LT05_173026	132	y2021_0703_LC08_173026
66	y2001_0922_LE07_173026	133	y2021_0719_LC08_173026
67	y2002_0317_LE07_173026		

Table S4. ANOVA of the difference between the means of $BAND_{mean}$ values in soil varieties identified in field studies.

Band		Sum of Squares	df	Mean Square	F	p-Value	F Crit
BLUE	Between groups	0.0006	4	0.0002	62.42	4.08E-23	2.49
	Within groups	0.0002	75	0.0000			
	Total	0.0008	79				
GREEN	Between groups	0.0029	4	0.0007	97.66	5.95E-29	2.49
	Within groups	0.0006	75	0.0000			
	Total	0.0035	79				
RED	Between groups	0.0073	4	0.0018	117.26	1.79E-31	2.49
	Within groups	0.0012	75	0.0000			
	Total	0.0085	79				
NIR	Between groups	0.0127	4	0.0032	103.34	1.00E-29	2.49
	Within groups	0.0023	75	0.0000			
	Total	0.0151	79				
SWIR1	Between groups	0.0053	4	0.0013	18.18	1.77E-10	2.49
	Within groups	0.0055	75	0.0001			
	Total	0.0108	79				
SWIR2	Between groups	0.0019	4	0.0005	5.94	3.31E-04	2.49
	Within groups	0.0061	75	0.0001			
	Total	0.0080	79				

Table S5. Post hoc analysis of the means of $BLUE_{mean}$ values in soil varieties identified in field studies (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test*				
	1	2	3	4	5
	mean = 0.116581	mean = 0.119266	mean = 0.121197	mean = 0.124211	mean = 0.125866
1		0.031345	0.000141	0.000123	0.000123
2	0.031345		0.001423	0.000123	0.000123
3	0.000141	0.001423		0.000164	0.000123
4	0.000123	0.000123	0.000164		0.081902
5	0.000123	0.000123	0.000123	0.081902	

* Error: Between groups MS = 0.00000, ds = 75.00.

Table S6. Post hoc analysis of the means of $GREEN_{mean}$ values in soil varieties identified in field studies (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test*				
	1	2	3	4	5
	mean = 0.094927	mean = 0.100614	mean = 0.105379	mean = 0.111238	mean = 0.115272
1		0.004998	0.000123	0.000123	0.000123
2	0.004998		0.000125	0.000123	0.000123
3	0.000123	0.000125		0.000127	0.000123
4	0.000123	0.000123	0.000127		0.004817
5	0.000123	0.000123	0.000123	0.004817	

* Error: Between groups MS = 0.00001, ds = 75.00.

Table S7. Post hoc analysis of the means of RED_{mean} values in soil varieties identified in field studies (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test*				
	1	2	3	4	5
	mean = 0.094050	mean = 0.102074	mean = 0.109684	mean = 0.118826	mean = 0.125839
1		0.006516	0.000123	0.000123	0.000123
2	0.006516		0.000123	0.000123	0.000123
3	0.000123	0.000123		0.000123	0.000123
4	0.000123	0.000123	0.000123		0.000510
5	0.000123	0.000123	0.000123	0.000510	

* Error: Between groups MS = 0.00002, ds = 75.00.

Table S8. Post hoc analysis of the means of NIR_{mean} values in soil varieties identified in field studies (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test*				
	1	2	3	4	5
	mean = 0.117476	mean = 0.129261	mean = 0.139674	mean = 0.151499	mean = 0.159972
1		0.004044	0.000123	0.000123	0.000123
2	0.004044		0.000123	0.000123	0.000123
3	0.000123	0.000123		0.000127	0.000123
4	0.000123	0.000123	0.000127		0.003337
5	0.000123	0.000123	0.000123	0.003337	

* Error: Between groups MS = 0.00003, ds = 75.00.

Table S9. Post hoc analysis of the means of $SWIRI_{mean}$ values in soil varieties identified in field studies (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test*				
	1	2	3	4	5
	mean = 0.192582	mean = 0.200126	mean = 0.208639	mean = 0.215285	mean = 0.219198
1		0.546471	0.014285	0.000266	0.000128
2	0.546471		0.015417	0.000317	0.000127
3	0.014285	0.015417		0.283641	0.027077
4	0.000266	0.000317	0.283641		0.794233
5	0.000128	0.000127	0.027077	0.794233	

* Error: Between groups MS = 0.00007, ds = 75.00.

Table S10. Post hoc analysis of the means of $SWIR2_{mean}$ values in soil varieties identified in field studies (significant differences are shown in red).

Soils	Approximate Probabilities (<i>p</i> -Values) for Post Hoc Test*				
	1	2	3	4	5
	mean = 0.170052	mean = 0.174140	mean = 0.180152	mean = 0.183575	mean = 0.185467
1		0.934333	0.306222	0.081413	0.032692
2	0.934333		0.206671	0.068879	0.023860
3	0.306222	0.206671		0.868967	0.602301
4	0.081413	0.068879	0.868967		0.985838
5	0.032692	0.023860	0.602301	0.985838	

* Error: Between groups MS = 0.00008, ds = 75.00.

Table S11. ANOVA of the difference between the means of OM content in $BAND_{mean}$ classes for soil varieties.

Band		Sum of Squares	df	Mean Square	F	p-Value	F Crit
BLUE	Between groups	14.49	4	3.62	36.97	4.74E-17	2.49
	Within groups	7.35	75	0.10			
	Total	21.84	79				
GREEN	Between groups	18.38	4	4.60	99.75	3.07E-29	2.49
	Within groups	3.46	75	0.05			
	Total	21.84	79				
RED	Between groups	17.82	4	4.46	83.15	8.52E-27	2.49
	Within groups	4.02	75	0.05			
	Total	21.84	79				
NIR	Between groups	18.62	4	4.65	108.25	2.30E-30	2.49
	Within groups	3.22	75	0.04			
	Total	21.84	79				

Table S12. ANOVA of the difference between the means of thickness of humus horizon in *BAND_{mean}* classes for soil varieties.

Band		Sum of Squares	df	Mean Square	F	<i>p</i> -Value	F Crit
BLUE	Between groups	6536.60	4	1634.15	56.50	6.81E-22	2.49
	Within groups	2169.20	75	28.92			
	Total	8705.80	79				
GREEN	Between groups	7424.04	4	1856.01	108.60	2.08E-30	2.49
	Within groups	1281.76	75	17.09			
	Total	8705.80	79				
RED	Between groups	7602.96	4	1900.74	129.26	7.58E-33	2.49
	Within groups	1102.84	75	14.70			
	Total	8705.80	79				
NIR	Between groups	7452.09	4	1863.02	111.45	9.11E-31	2.49
	Within groups	1253.71	75	16.72			
	Total	8705.80	79				

Table S13. Post hoc analysis of the means of OM content in *BLUE_{mean}* classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (<i>p</i> -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 3.250	mean = 3.064	mean = 2.616	mean = 2.390	mean = 1.960
1		0.756725	0.001237	0.000126	0.000123
2	0.756725		0.000206	0.000186	0.000123
3	0.001237	0.000206		0.493157	0.000124
4	0.000126	0.000186	0.493157		0.024110
5	0.000123	0.000123	0.000124	0.024110	

* Error: Between groups MS = 0.09799, ds = 75.00.

Table S14. Post hoc analysis of the means of OM content in *GREEN_{mean}* classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (<i>p</i> -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 3.314	mean = 3.063	mean = 2.477	mean = 2.250	mean = 1.892
1		0.193207	0.000123	0.000123	0.000123
2	0.193207		0.000123	0.000123	0.000123
3	0.000123	0.000123		0.064233	0.000123
4	0.000123	0.000123	0.064233		0.001099
5	0.000123	0.000123	0.000123	0.001099	

* Error: Between groups MS = 0.04608, ds = 75.00.

Table S15. Post hoc analysis of the means of OM content in RED_{mean} classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 3.314	mean = 3.086	mean = 2.581	mean = 2.269	mean = 1.915
1		0.354805	0.000123	0.000123	0.000123
2	0.354805		0.000123	0.000123	0.000123
3	0.000123	0.000123		0.002597	0.000123
4	0.000123	0.000123	0.002597		0.002067
5	0.000123	0.000123	0.000123	0.002067	

* Error: Between groups MS = 0.05358, ds = 75.00.

Table S16. Post hoc analysis of the means of OM content in NIR_{mean} classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 3.314	mean = 3.072	mean = 2.433	mean = 2.258	mean = 1.929
1		0.195921	0.000123	0.000123	0.000123
2	0.195921		0.000123	0.000123	0.000123
3	0.000123	0.000123		0.245160	0.000123
4	0.000123	0.000123	0.245160		0.002043
5	0.000123	0.000123	0.000123	0.002043	

* Error: Between groups MS = 0.04299, ds = 75.00.

Table S17. Post hoc analysis of the means of thickness of humus horizon in *BLUE_{mean}* classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (<i>p</i> -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 54.88	mean = 45.14	mean = 36.80	mean = 31.40	mean = 24.67
1		0.004786	0.000123	0.000123	0.000123
2	0.004786		0.000139	0.000124	0.000123
3	0.000123	0.000139		0.174803	0.000123
4	0.000123	0.000124	0.174803		0.049552
5	0.000123	0.000123	0.000123	0.049552	

* Error: Between groups MS = 28.923, ds = 75.00.

Table S18. Post hoc analysis of the means of thickness of humus horizon in *GREEN_{mean}* classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (<i>p</i> -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 56.86	mean = 44.19	mean = 35.92	mean = 29.81	mean = 23.33
1		0.000124	0.000123	0.000123	0.000123
2	0.000124		0.000142	0.000123	0.000123
3	0.000123	0.000142		0.003034	0.000123
4	0.000123	0.000123	0.003034		0.002436
5	0.000123	0.000123	0.000123	0.002436	

* Error: Between groups MS = 17.090, ds = 75.00.

Table S19. Post hoc analysis of the means of thickness of humus horizon in RED_{mean} classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 56.86	mean = 44.96	mean = 36.94	mean = 30.25	mean = 23.38
1		0.000124	0.000123	0.000123	0.000123
2	0.000124		0.000123	0.000123	0.000123
3	0.000123	0.000123		0.000161	0.000123
4	0.000123	0.000123	0.000161		0.000290
5	0.000123	0.000123	0.000123	0.000290	

* Error: Between groups MS = 14.704, ds = 75.00.

Table S20. Post hoc analysis of the means of thickness of humus horizon in NIR_{mean} classes for soil varieties (significant differences are shown in red).

Soils	Approximate Probabilities (p -Values) for Post Hoc Test *				
	1	2	3	4	5
	mean = 56.86	mean = 44.38	mean = 35.00	mean = 29.50	mean = 24.21
1		0.000124	0.000123	0.000123	0.000123
2	0.000124		0.000123	0.000123	0.000123
3	0.000123	0.000123		0.012790	0.000123
4	0.000123	0.000123	0.012790		0.018491
5	0.000123	0.000123	0.000123	0.018491	

* Error: Between groups MS = 16.716, ds = 75.00.

Table S21. ANOVA of the difference between the means of $BAND_{mean}$ values in degraded and non-degraded soils identified in field studies.

Band		Sum of Squares	df	Mean Square	F	<i>p</i> -Value	F Crit
BLUE	Between groups	0.0004	1	0.0004	76.09	3.72E-13	3.96
	Within groups	0.0004	78	0.0000			
	Total	0.0008	79				
GREEN	Between groups	0.0020	1	0.0020	100.82	1.05E-15	3.96
	Within groups	0.0015	78	0.0000			
	Total	0.0035	79				
RED	Between groups	0.0049	1	0.0049	106.69	2.95E-16	3.96
	Within groups	0.0036	78	0.0000			
	Total	0.0085	79				
NIR	Between groups	0.0087	1	0.0087	107.57	2.45E-16	3.96
	Within groups	0.0063	78	0.0001			
	Total	0.0151	79				
SWIR1	Between groups	0.0041	1	0.0041	47.88	1.12E-09	3.96
	Within groups	0.0067	78	0.0001			
	Total	0.0108	79				
SWIR2	Between groups	0.0016	1	0.0016	19.60	3.06E-05	3.96
	Within groups	0.0064	78	0.0001			
	Total	0.0080	79				

Table S22. ANOVA of the difference between the means of OM content in $BAND_{mean}$ classes for degraded and non-degraded soils.

Band		Sum of Squares	df	Mean Square	F	<i>p</i> -Value	F Crit
BLUE	Between groups	10.25	1	10.25	68.97	2.41E-12	3.96
	Within groups	11.59	78	0.15			
	Total	21.84	79				
GREEN	Between groups	15.85	1	15.85	206.59	1.26E-23	3.96
	Within groups	5.99	78	0.08			
	Total	21.84	79				
RED	Between groups	14.35	1	14.35	149.34	8.40E-20	3.96
	Within groups	7.49	78	0.10			
	Total	21.84	79				
NIR	Between groups	16.39	1	16.39	234.75	3.12E-25	3.96
	Within groups	5.45	78	0.07			
	Total	21.84	79				
SWIR1	Between groups	9.96	1	9.96	65.45	6.30E-12	3.96
	Within groups	11.88	78	0.15			
	Total	21.84	79				
SWIR2	Between groups	7.32	1	7.32	39.34	1.84E-08	3.96
	Within groups	14.52	78	0.19			
	Total	21.84	79				

Table S23. ANOVA of the difference between the means of thickness of humus horizon in *BAND_{mean}* classes for degraded and non-degraded soils.

Band		Sum of Squares	df	Mean Square	F	<i>p</i> -Value	F Crit
BLUE	Between groups	4594.25	1	4594.25	87.16	2.41E-14	3.96
	Within groups	4111.55	78	52.71			
	Total	8705.80	79				
GREEN	Between groups	5512.99	1	5512.99	134.68	1.15E-18	3.96
	Within groups	3192.81	78	40.93			
	Total	8705.80	79				
RED	Between groups	5489.60	1	5489.60	133.14	1.53E-18	3.96
	Within groups	3216.20	78	41.23			
	Total	8705.80	79				
NIR	Between groups	5714.08	1	5714.08	148.98	8.94E-20	3.96
	Within groups	2991.72	78	38.36			
	Total	8705.80	79				
SWIR1	Between groups	4176.54	1	4176.54	71.93	1.10E-12	3.96
	Within groups	4529.26	78	58.07			
	Total	8705.80	79				
SWIR2	Between groups	3017.86	1	3017.86	41.38	9.24E-09	3.96
	Within groups	5687.94	78	72.92			
	Total	8705.80	79				