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UK Onshore Scheme

Environmental Statement

Volume 4 Document ES-4-C.04

Appendix 20

Agriculture & Soils (Proposed Converter Station)

VKL-08-39-G500-009

August 2017

Co-financed by the European Union
Connecting Europe Facility

Contents

Appendix 20.1 Proposed Converter Station Site Agricultural Land Classification

Soil Profiles

Description of Soil Profiles

Table Error! No text of specified style in document..**1 Legend for Soil Profile Terminology**

Terminology	Description
Horizons	number of different horizons identified within the profile
Depth	depth to the bottom of the (horizon number) horizon in cm
Soil Type	mineral (M) or organic-mineral (OM)/peaty (P) texture
Texture	C - clay, ZC - silty clay, SC - sandy clay, CL - clay loam, SCL – sandy clay loam, ZCL - silty clay loam, SL - sandy loam, LS - loamy sand, S - sand). - Abbreviations M and H medium and heavy texture (M <27 %, H > 27 % Clay)
Hue	Munsell colour hue
Value	Munsell colour value
Chroma	Munsell colour chroma
Mottling Abundance	presence of >2 % mottling, followed by Munsell colour (value and chroma) of the mottles
Ped faces different colour	colour of ped faces different from the main horizon colour
Biopores	'yes' if >0.5 % biopores greater than 0.5 mm diameter present
Stones >2 cm	Percentage of 2 – 6 cm diameter stones
Stones > 6 cm	Percentage of > 6 cm diameter stones
Structure	Structure type; sg - single grain; gr – granular; sab - subangular blocky; ab - angular blocky; pr – prismatic; pl – platy; mas – massive
Development	How well the structure is developed; w – weak; m – moderate; s – strong
strength	Soil consistence; l – loose; vf - very friable; fr – friable; fir – firm; vfir - very firm; exfir - extremely firm; exhd - extremely hard

Table 1.2: Converter Station Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
1	1	40	M	MZCL	10YR	4	4	0				no				yes	0	0	SAB	W	C	L
	2	80	M	ZC	2.5Y	4	3	20	10YR	6	8	yes	5Y	5	2	yes	0	0	SAB	M	M	FIR
2	1	28	M	ZL	10YR	4	4	0				no				yes	0	0	SAB	M	M	L
	2	85	M	SL	10YR	5	6	40	10YR	5	8	yes	2.5Y	6	2	yes	0	0	AB	W	C	VFR
3	1	35	M	MZCL	10YR	4	3	2	10YR	6	8	no				yes	0	0	SAB	W	M	L
	2	80	M	SL	10YR	6	6	40	10YR	6	8	yes	2.5Y	6	1	yes	0	0	AB	M	M	VFR
4	1	35	M	SZL	10YR	4	3	0				no				yes	0	0	SAB	W	M	L
	2	80	M	ZL	10YR	5	6	20	10YR	6	8	yes	2.5Y	6	2	yes	0	0	SAB	W	C	VFR
5	1	35	M	ZL	10YR	5	4	0				no				yes	0	0	SAB	M	M	L
	2	65	M	ZL	10YR	5	6	0				no				yes	0	0	AB	W	C	FIR
6	1	30	M	ZL	2.5Y	4	3	0				no				yes	0	0	SAB	M	M	L
	2	70	M	ZL	2.5Y	5	1	20	10YR	6	8	no				yes	0	0	AB	W	C	FIR
7	1	45	M	ZL	7.5YR	4	4	0				no				yes	0	0	GR	W	M	L
	2	60	M	MCL	10YR	5	1	20	10YR	6	8	yes	10YR	2	1	yes	0	0	SAB	M	C	EXHD
8	1	30	M	ZL	10YR	3	2	0				no				yes	0	0	SAB	M	M	L
	2	60	M	ZL	10YR	3	4	20	10YR	6	8	no				yes	0	0	AB	W	C	EXHD
9	1	50	M	ZL	10YR	4	3	0				no				yes	0	0	GR	W	M	L
	2	65	M	SL	10YR	5	6	20	10YR	6	8	yes	10YR	6	1	yes	0	0	SAB	M	M	VFR

Table 1.2: Converter Station Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
10	1	35	M	ZL	10YR	4	3	0				no				yes	0	0	GR	W	M	L
	2	80	M	SL	10YR	5	6	20	10YR	6	8	yes				yes	0	0	SAB	M	M	VFR
11	1	40	M	ZL	10YR	4	3	0				no				yes	0	0	GR	W	M	L
	2	85	M	SL	10YR	5	6	20	10YR	6	8	yes				yes	0	0	SAB	M	M	VFR
12	1	35	M	ZL	10YR	4	3	0				no				yes	0	0	GR	W	M	L
	2	80	M	SL	7.5YR	6	4	20	10YR	6	8	yes	7.5YR	6	2	yes	0	0	SAB	M	M	VFR
13	1	15	M	MZCL	10YR	4	4	0				no				yes	0	0	SAB	W	C	L
	2	45	M	MZCL	10YR	4	4	0				no				yes	0	0	AB	S	VC	FIR
	3	120	M	MZCL	10YR	4	3	20	10YR	6	8	yes	N	6		yes	0	0	AB	S	VC	EXHD
14	1	40	M	ZL	10YR	4	4	0				no				yes	0	0	GR	W	M	L
	2	65	M	MZCL	2.5Y	5	1	40	10YR	6	8	yes	10YR	2	1	yes	0	0	SAB	S	C	EXHD
15	1	25	M	ZC	10YR	4	4	0				no				yes	0	0	SAB	M	M	L
	2	55	M	ZC	2.5Y	5	1	20	10YR	6	8	no				yes	0	0	AB	S	M	EXHD
16	1	40	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	C	L
	2	60	M	HZCL	10YR	5	1	40	10YR	4	6	no				no	0	0	AB	W	VC	FIR
	3	120	M	ZC	7.5YR	4	2	40	7.5YR	4	1	no				no	0	0	AB	S	VC	EXHD
17	1	35	M	HZCL	10YR	3	2	0				no				yes	0	0	SAB	S	C	FIR

Table 1.2: Converter Station Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
	2	120	M	ZC	7.5YR	3	3	20	10YR	5	1	yes	7.5YR	4	2	yes	0	0	AB	S	VC	VFIR
18	1	35	M	HZCL	10YR	3	2	0				no				yes	0	0	SAB	S	C	FIR
	2	120	M	ZC	7.5YR	3	4	20	10YR	4	1	no				yes	0	0	AB	S	VC	FIR
19	1	40	M	HZCL	10YR	3	2	0				no				yes	0	0	SAB	S	C	FIR
	2	120	M	ZC	7.5YR	3	4	20	10YR	4	1	no				yes	0	0	AB	S	VC	FIR
20	1	35	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	W	C	L
	2	50	M	SZL	10YR	4	3	0				no				yes	0	0	AB	W	M	VFR
	3	120	M	SL	10YR	6	3	0				no				yes	0	0	AB	W	M	VFR
21	1	40	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	C	FIR
	2	120	M	HZCL	7.5YR	4	4	2	7.5YR	5	1	no				yes	0	0	AB	S	VC	FIR
22	1	40	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	C	FIR
	2	70	M	SZL	10YR	5	2	20	10YR	4	6	no				yes	0	0	AB	M	M	VFR
	3	120	M	SZL	10YR	5	1	2	10YR	4	6	no				yes	0	0	AB	W	M	VFR
23	1	35	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	M	FIR
	2	70	M	SZL	7.5YR	5	4	20	7.5YR	4	6	no				yes	0	0	AB	M	M	VFR
	3	120	M	ZC	2.5Y	4	1	0				no				yes	0	0	AB	S	VC	FIR
24	1	40	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	M	FIR

Table 1.2: Converter Station Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
	2	75	M	SZL	10YR	5	2	20	7.5YR	4	6	no				yes	0	0	AB	M	M	FIR
	3	120	M	ZC	7.5YR	3	4	20	10YR	5	1	no				yes	0	0	AB	S	VC	FIR
25	1	37	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	M	FIR
	2	50	M	HZCL	2.5Y	4	1	2	N	2.5		no				yes	0	0	AB	M	M	FIR
	3	120	M	ZC	7.5YR	3	2	2	7.5YR	5	1	no				yes	0	0	AB	S	VC	FIR
26	1	35	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	M	FIR
	2	65	M	MZCL	7.5YR	4	3	2	7.5YR	7	1	no				yes	0	0	AB	M	C	FIR
	3	120	M	SZL	10YR	5	4	2	10YR	5	8	no				yes	0	0	AB	M	C	VFR
27	1	40	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	M	FIR
	2	55	M	HZCL	2.5Y	4	1	0				no				yes	0	0	AB	S	C	FIR
	3	120	M	ZC	7.5YR	3	3	20	2.5Y	4	1	no				yes	0	0	AB	S	C	FIR
28	1	40	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	C	FIR
	2	65	M	SZL	10YR	4	2	0				no				yes	0	0	AB	M	M	FIR
	3	120	M	SL	10YR	5	3	2	10YR	4	6	no				yes	0	0	AB	W	M	FR
29	1	35	M	SZL	10YR	3	2	0				no				yes	0	0	SAB	M	M	FR
	2	65	M	SZL	7.5YR	4	3	20	7.5YR	4	4	no				yes	0	0	AB	W	C	FR
	3	120	M	SL	7.5YR	6	2	0				no				yes	0	0	SG			VFR
30	1	35	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	C	FIR

Table 1.2: Converter Station Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
	2	65	M	SZL	10YR	4	4	2	10YR	7	2	no				yes	0	0	AB	W	M	VFR
	3	120	M	SL	10YR	6	6	0				no				yes	0	0	AB	W	M	VFR
31	1	40	M	MZCL	10YR	3	2	0				no				yes	0	0	SAB	M	C	FIR
	2	120	M	HZCL	7.5YR	3	2	20	2.5Y	4	1	no				yes	0	0	AB	S	VC	FIR

Table 1.3 combines the results of the classification for each limitation, providing the overall ALC assessment for each sample point.

Table 1.3: Converter Station ALC Assessment

Sample	Climatic ALC	Gradient	Summer Flood Risk	Winter Flood Risk	Soil Depth	Topsoil stoniness	Wetness Class	Wetness limitation	Droughtiness	Topsoil texture	ALC Grade	Limited by	SPL criteria	Criteria for limitation(s)
1	1	1	1	1	1	1	I	1	1	1	**1**		No SPL, gleyed < 70 cm	
2	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
3	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
4	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
5	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
6	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
7	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL, gleyed < 70 cm	Moisture Balance
8	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
9	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
10	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
11	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
12	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	

Table 1.3: Converter Station ALC Assessment

Sample	Climatic ALC	Gradient	Summer Flood Risk	Winter Flood Risk	Soil Depth	Topsoil stoniness	Wetness Class	Wetness limitation	Droughtiness	Topsoil texture	ALC Grade	Limited by	SPL criteria	Criteria for limitation(s)
13	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
14	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL, gleyed < 70 cm	Moisture Balance
15	1	1	1	1	2	1	I	3a	3b	1	**3b**	Droughtiness	No SPL, gleyed < 70 cm	Moisture Balance
16	1	1	1	1	1	1	II	2	2	1	**2**	Droughtiness	H2 very coarse AB structure, gleyed < 70 cm.	Moisture Balance
17	1	1	1	1	1	1	I	2	2	1	**2**		No SPL	
18	1	1	1	1	1	1	I	2	2	1	**2**		No SPL	
19	1	1	1	1	1	1	I	2	2	1	**2**		No SPL	
20	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
21	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
22	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
23	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
24	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
25	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
26	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture

Table 1.3: Converter Station ALC Assessment														
Sample	Climatic ALC	Gradient	Summer Flood Risk	Winter Flood Risk	Soil Depth	Topsoil stoniness	Wetness Class	Wetness limitation	Droughtiness	Topsoil texture	ALC Grade	Limited by	SPL criteria	Criteria for limitation(s)
														Balance
27	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
28	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
29	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
30	1	1	1	1	1	1	I	1	1	1	**1**		No SPL	
31	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance

Droughtiness

Droughtiness Calculations

Table Error! No text of specified style in document.**.1 Droughtiness Abbreviations**	
Abbreviation	**Description**
TAv	Total amount of soil water available to plants, considered to be the volumetric soil water content between 0.05 and 15 bar suction or, in case of sands and loamy sands, 0.10 and 15 bar suction. These suctions approximate to the conditions of field capacity and wilting point (when the plants can extract no more moisture from the soil).
EAv	Easily available water, held in the soil between 0.05 and 2.0 bar suction, used for calculating cereal available water below 50 cm depth where root systems are less well developed, and the plant's ability to extract water is diminished.
Values of TAv and EAv are estimated for each horizon based on soil texture and structural condition according to the ALC guidelines (MAFF, 1988).	
AP	crop adjusted available water capacity, a measure of the quantity of water held in the soil profile which can be taken up by a specific crop.
MD	the moisture deficit term used in the ALC droughtiness assessment is a crop-related meteorological variable which represents the balance between rainfall and potential evapotranspiration calculated over a critical portion of the growing season.
MB	moisture balance: MB=AP-MD, MB for wheat and potatoes determines limitation by droughtiness

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes								ALC
Auger point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
1	Topsoil	TAv	40	MZCL	0	GOOD	19		0	40	40	19	100	0	0	760			0	40	40	19	100	0	0	760			
		EAv	N/A						0	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	40	ZC	0	GOOD	21	15	40	80	10	21	100	0	0	210			40	80	30	21	100	0	0	630			
		EAv	N/A						40	80	30	15	100	0	0	450			N/A										
	Subsoil 2	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0	142	31	N/A								139	35	1
	Subsoil 3	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
2	Topsoil	TAv	28	ZL	0	GOOD	23		0	28	28	23	100	0	0	644			0	28	28	23	100	0	0	644			
		EAv	N/A						0	28	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	57	SL	0	GOOD	17	13	28	85	22	17	100	0	0	374			28	85	42	17	100	0	0	714			
		EAv	N/A						28	85	35	13	100	0	0	455			N/A										
	Subsoil 2	TAv							85	85	0	0	100	0	0	0			85	85	0	0	100	0	0	0			
		EAv	N/A						85	85	0	0	100	0	0	0	147.3	36	N/A								135.8	32	1
	Subsoil 3	TAv							85	85	0	0	100	0	0	0			85	85	0	0	100	0	0	0			
		EAv	N/A						85	85	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							85	85	0	0	100	0	0	0			85	85	0	0	100	0	0	0			
		EAv	N/A						85	85	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
3	Topsoil	TAv	35	MZCL	0	GOOD	19		0	35	35	19	100	0	0	665			0	35	35	19	100	0	0	665			
		EAv	N/A						0	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	45	SL	0	GOOD	17	13	35	80	15	17	100	0	0	255			35	80	35	17	100	0	0	595			
		EAv	N/A						35	80	30	13	100	0	0	390			N/A										
	Subsoil 2	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0	131	20	N/A								126	22	2
	Subsoil 3	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
4	Topsoil	TAv	35	SZL	0	GOOD	19		0	35	35	19	100	0	0	665			0	35	35	19	100	0	0	665			
		EAv	N/A						0	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	45	ZL	0	GOOD	23	17	35	80	15	23	100	0	0	345			35	80	35	23	100	0	0	805			
		EAv	N/A						35	80	30	17	100	0	0	510			N/A										
	Subsoil 2	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0	152	41	N/A								147	43	1
	Subsoil 3	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
5	Topsoil	TAv	35	ZL	0	GOOD	23		1	35	35	23	100	0	0	805			1	35	35	23	100	0	0	805			
		EAv	N/A						1	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	ZL	0	MODERATE	22	14	35	65	15	22	100	0	0	330			35	65	30	22	100	0	0	660			
		EAv	N/A						35	65	15	14	100	0	0	210			N/A										
	Subsoil 2	TAv							65	65	0	0	100	0	0	0			65	65	0	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0	134.5	24	N/A								146.5	42	2
	Subsoil 3	TAv							65	65	0	0	100	0	0	0			65	65	5	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							65	65	0	0	100	0	0	0			65	65	0	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
6	Topsoil	TAv	26	ZL	0	GOOD	23		1	26	26	23	100	0	0	598			1	26	26	23	100	0	0	598			
		EAv	N/A						1	26	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	40	ZL	0	MODERATE	22	14	26	66	24	22	100	0	0	528			26	66	40	22	100	0	0	880			
		EAv	N/A						26	66	16	14	100	0	0	224			N/A										
	Subsoil 2	TAv							66	66	0	0	100	0	0	0			66	66	0	0	100	0	0	0			
		EAv	N/A						66	66	0	0	100	0	0	0	135	24	N/A								147.8	44	2
	Subsoil 3	TAv							66	66	0	0	100	0	0	0			66	66	4	0	100	0	0	0			
		EAv	N/A						66	66	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							66	66	0	0	100	0	0	0			66	66	0	0	100	0	0	0			
		EAv	N/A						66	66	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes								ALC
Auger point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
7	Topsoil	TAv	45	ZL	0	GOOD	23		1	45	45	23	100	0	0	1035			1	45	45	23	100	0	0	1035			
		EAv	N/A						1	45	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	15	MCL	0	POOR	12	7	45	60	5	12	100	0	0	60			45	60	15	12	100	0	0	180			
		EAv	N/A						45	60	10	7	100	0	0	70			N/A										
	Subsoil 2	TAv							60	60	0	0	100	0	0	0			60	60	0	0	100	0	0	0			
		EAv	N/A						60	60	0	0	100	0	0	0	116.5	6	N/A								121.5	17	2
	Subsoil 3	TAv							60	60	0	0	100	0	0	0			60	60	10	0	100	0	0	0			
		EAv	N/A						60	60	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							60	60	0	0	100	0	0	0			60	60	0	0	100	0	0	0			
		EAv	N/A						60	60	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
8	Topsoil	TAv	30	ZL	0	GOOD	23		1	30	30	23	100	0	0	690			1	30	30	23	100	0	0	690			
		EAv	N/A						1	30	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	ZL	0	MODERATE	22	14	30	60	20	22	100	0	0	440			30	60	30	22	100	0	0	660			
		EAv	N/A						30	60	10	14	100	0	0	140			N/A										
	Subsoil 2	TAv							60	60	0	0	100	0	0	0			60	60	0	0	100	0	0	0			
		EAv	N/A						60	60	0	0	100	0	0	0	127	16	N/A								135	31	2
	Subsoil 3	TAv							60	60	0	0	100	0	0	0			60	60	10	0	100	0	0	0			
		EAv	N/A						60	60	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							60	60	0	0	100	0	0	0			60	60	0	0	100	0	0	0			
		EAv	N/A						60	60	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
9	Topsoil	TAv	50	ZL	0	GOOD	23		2	50	50	23	100	0	0	1150			2	50	50	23	100	0	0	1150			
		EAv	N/A						2	50	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	15	SL	0	GOOD	17	13	50	65	0	17	100	0	0	0			50	65	15	17	100	0	0	255			
		EAv	N/A						50	65	15	13	100	0	0	195			N/A										
	Subsoil 2	TAv							65	65	0	0	100	0	0	0			65	65	0	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0	134.5	24	N/A								140.5	36	2
	Subsoil 3	TAv							65	65	0	0	100	0	0	0			65	65	5	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							65	65	0	0	100	0	0	0			65	65	0	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
10	Topsoil	TAv	35	ZL	0	GOOD	23		2	35	35	23	100	0	0	805			2	35	35	23	100	0	0	805			
		EAv	N/A						2	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	45	SL	0	GOOD	17	13	35	80	15	17	100	0	0	255			35	80	35	17	100	0	0	595			
		EAv	N/A						35	80	30	13	100	0	0	390			N/A										
	Subsoil 2	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0	145	34	N/A								140	36	1
	Subsoil 3	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
11	Topsoil	TAv	40	ZL	0	GOOD	23		2	40	40	23	100	0	0	920			2	40	40	23	100	0	0	920			
		EAv	N/A						2	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	45	SL	0	GOOD	17	13	40	85	10	17	100	0	0	170			40	85	30	17	100	0	0	510			
		EAv	N/A						40	85	35	13	100	0	0	455			N/A										
	Subsoil 2	TAv							85	85	0	0	100	0	0	0			85	85	0	0	100	0	0	0			
		EAv	N/A						85	85	0	0	100	0	0	0	154.5	44	N/A								143	39	1
	Subsoil 3	TAv							85	85	0	0	100	0	0	0			85	85	0	0	100	0	0	0			
		EAv	N/A						85	85	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							85	85	0	0	100	0	0	0			85	85	0	0	100	0	0	0			
		EAv	N/A						85	85	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
12	Topsoil	TAv	35	ZL	0	GOOD	23		2	35	35	23	100	0	0	805			2	35	35	23	100	0	0	805			
		EAv	N/A						2	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	45	SL	0	GOOD	17	13	35	80	15	17	100	0	0	255			35	80	35	17	100	0	0	595			
		EAv	N/A						35	80	30	13	100	0	0	390			N/A										
	Subsoil 2	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0	145	34	N/A								140	36	1
	Subsoil 3	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							80	80	0	0	100	0	0	0			80	80	0	0	100	0	0	0			
		EAv	N/A						80	80	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes								ALC
Auger point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
13	Topsoil	TAv	15	MZCL	0	GOOD	19		3	15	15	19	100	0	0	285			3	15	15	19	100	0	0	285			
		EAv	N/A						3	15	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	MZCL	0	POOR	13	8	15	45	30	13	100	0	0	390			15	45	30	13	100	0	0	390			
		EAv	N/A						15	45	0	8	100	0	0	0			N/A										
	Subsoil 2	TAv	75	MZCL	0	POOR	13	8	45	120	5	13	100	0	0	65			45	120	25	13	100	0	0	325			
		EAv	N/A						45	120	70	8	100	0	0	560	130	19	N/A								100	-4	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
14	Topsoil	TAv	40	ZL	0	GOOD	23		3	40	40	23	100	0	0	920			3	40	40	23	100	0	0	920			
		EAv	N/A						3	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	25	MZCL	0	MODERATE	17	10	40	65	10	17	100	0	0	170			40	65	25	17	100	0	0	425			
		EAv	N/A						40	65	15	10	100	0	0	150			N/A										
	Subsoil 2	TAv							65	65	0	0	100	0	0	0			65	65	0	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0	124	13	N/A								134.5	30	2
	Subsoil 3	TAv							65	65	0	0	100	0	0	0			65	65	5	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							65	65	0	0	100	0	0	0			65	65	0	0	100	0	0	0			
		EAv	N/A						65	65	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
15	Topsoil	TAv	25	ZC	0	GOOD	17		3	25	25	17	100	0	0	425			3	25	25	17	100	0	0	425			
		EAv	N/A						3	25	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	ZC	0	POOR	12	7	25	55	25	12	100	0	0	300			25	55	30	12	100	0	0	360			
		EAv	N/A						25	55	5	7	100	0	0	35			N/A										
	Subsoil 2	TAv							55	55	0	0	100	0	0	0			55	55	0	0	100	0	0	0			
		EAv	N/A						55	55	0	0	100	0	0	0	76	-35	N/A								78.5	-26	3b
	Subsoil 3	TAv							55	55	0	0	100	0	0	0			55	55	15	0	100	0	0	0			
		EAv	N/A						55	55	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							55	55	0	0	100	0	0	0			55	55	0	0	100	0	0	0			
		EAv	N/A						55	55	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
16	Topsoil	TAv	40	MZCL	0	GOOD	19		3	40	40	19	100	0	0	760			3	40	40	19	100	0	0	760			
		EAv	N/A						3	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	20	HZCL	0	POOR	12	6	40	60	10	12	100	0	0	120			40	60	20	12	100	0	0	240			
		EAv	N/A						40	60	10	6	100	0	0	60			N/A										
	Subsoil 2	TAv	60	ZC	0	POOR	12	7	60	120	0	12	100	0	0	0			60	120	10	12	100	0	0	120			
		EAv	N/A						60	120	60	7	100	0	0	420	136	25	N/A								112	8	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
17	Topsoil	TAv	35	HZCL	0	GOOD	19		4	35	35	19	100	0	0	665			4	35	35	19	100	0	0	665			
		EAv	N/A						4	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	85	ZC	0	POOR	12	7	35	120	15	12	100	0	0	180			35	120	35	12	100	0	0	420			
		EAv	N/A						35	120	70	7	100	0	0	490			N/A										
	Subsoil 2	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0	133.5	23	N/A								108.5	4	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
18	Topsoil	TAv	35	HZCL	0	GOOD	19		4	35	35	19	100	0	0	665			4	35	35	19	100	0	0	665			
		EAv	N/A						4	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	85	ZC	0	POOR	12	7	35	120	15	12	100	0	0	180			35	120	35	12	100	0	0	420			
		EAv	N/A						35	120	70	7	100	0	0	490			N/A										
	Subsoil 2	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0	133.5	23	N/A								108.5	4	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										

			Data inputs						Droughtiness																					
									AP wheat											AP potatoes										ALC
Auger point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
19	Topsoil	TAv	40	HZCL	0	GOOD	19		4	40	40	19	100	0	0	760			4	40	40	19	100	0	0	760			
		EAv	N/A						4	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	80	ZC	0	POOR	12	7	40	120	10	12	100	0	0	120			40	120	30	12	100	0	0	360			
		EAv	N/A						40	120	70	7	100	0	0	490			N/A										
	Subsoil 2	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0	137	26	N/A								112	8	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A																				
20	Topsoil	TAv	35	MZCL	0	GOOD	19		4	35	35	19	100	0	0	665			4	35	35	19	100	0	0	665			
		EAv	N/A						4	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	15	SZL	0	GOOD	23	17	35	50	15	23	100	0	0	345			35	50	15	23	100	0	0	345			
		EAv	N/A						35	50	0	17	100	0	0	0			N/A										
	Subsoil 2	TAv	70	SL	0	GOOD	17	13	50	120	0	17	100	0	0	0			50	120	20	17	100	0	0	340			
		EAv	N/A						50	120	70	13	100	0	0	910	192	81	N/A								135	31	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A																				
21	Topsoil	TAv	40	MZCL	0	GOOD	19		5	40	40	19	100	0	0	760			5	40	40	19	100	0	0	760			
		EAv	N/A						5	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	80	HZCL	0	POOR	12	6	40	120	10	12	100	0	0	120			40	120	30	12	100	0	0	360			
		EAv	N/A						40	120	70	6	100	0	0	420			N/A										
	Subsoil 2	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0	130	19	N/A								112	8	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A																				
22	Topsoil	TAv	40	MZCL	0	GOOD	19		5	40	40	19	100	0	0	760			5	40	40	19	100	0	0	760			
		EAv	N/A						5	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	SZL	0	MODERATE	17	11	40	70	10	17	100	0	0	170			40	70	30	17	100	0	0	510			
		EAv	N/A						40	70	20	11	100	0	0	220			N/A										
	Subsoil 2	TAv	50	SZL	0	GOOD	23	17	70	120	0	23	100	0	0	0			70	120	0	23	100	0	0	0			
		EAv	N/A						70	120	50	17	100	0	0	850	200	89	N/A								127	23	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A																				
23	Topsoil	TAv	35	MZCL	0	GOOD	19		5	35	35	19	100	0	0	665			5	35	35	19	100	0	0	665			
		EAv	N/A						5	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	35	SZL	0	MODERATE	17	11	35	70	15	17	100	0	0	255			35	70	35	17	100	0	0	595			
		EAv	N/A						35	70	20	11	100	0	0	220			N/A										
	Subsoil 2	TAv	50	ZC	0	POOR	12	7	70	120	0	12	100	0	0	0			70	120	0	12	100	0	0	0			
		EAv	N/A						70	120	50	7	100	0	0	350	149	38	N/A								126	22	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A																				
24	Topsoil	TAv	40	MZCL	0	GOOD	19		5	40	40	19	100	0	0	760			5	40	40	19	100	0	0	760			
		EAv	N/A						5	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	35	SZL	0	MODERATE	17	11	40	75	10	17	100	0	0	170			40	75	30	17	100	0	0	510			
		EAv	N/A						40	75	25	11	100	0	0	275			N/A										
	Subsoil 2	TAv	45	ZC	0	POOR	12	7	75	120	0	12	100	0	0	0			75	120	0	12	100	0	0	0			
		EAv	N/A						75	120	45	7	100	0	0	315	152	41	N/A								127	23	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A																				

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes								ALC
Auger point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
25	Topsoil	TAv	37	MZCL	0	GOOD	19		6	37	37	19	100	0	0	703			6	37	37	19	100	0	0	703			
		EAv	N/A						6	37	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	13	HZCL	0	MODERATE	17	10	37	50	13	17	100	0	0	221			37	50	13	17	100	0	0	221			
		EAv	N/A						37	50	0	10	100	0	0	0			N/A										
	Subsoil 2	TAv	70	ZC	0	POOR	12	7	50	120	0	12	100	0	0	0			50	120	20	12	100	0	0	240			
		EAv	N/A						50	120	70	7	100	0	0	490	141.4	31	N/A								116.4	12	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
26	Topsoil	TAv	35	MZCL	0	GOOD	19		6	35	35	19	100	0	0	665			6	35	35	19	100	0	0	665			
		EAv	N/A						6	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	MZCL	0	POOR	12	6	35	65	15	12	100	0	0	180			35	65	30	12	100	0	0	360			
		EAv	N/A						35	65	15	6	100	0	0	90			N/A										
	Subsoil 2	TAv	55	SZL	0	MODERATE	17	11	65	120	0	17	100	0	0	0			65	120	5	17	100	0	0	85			
		EAv	N/A						65	120	55	11	100	0	0	605	154	43	N/A								111	7	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
27	Topsoil	TAv	40	MZCL	0	GOOD	19		6	40	40	19	100	0	0	760			6	40	40	19	100	0	0	760			
		EAv	N/A						6	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	15	HZCL	0	MODERATE	17	10	40	55	10	17	100	0	0	170			40	55	15	17	100	0	0	255			
		EAv	N/A						40	55	5	10	100	0	0	50			N/A										
	Subsoil 2	TAv	65	ZC	0	POOR	12	7	55	120	0	12	100	0	0	0			55	120	15	12	100	0	0	180			
		EAv	N/A						55	120	65	7	100	0	0	455	143.5	33	N/A								119.5	15	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
28	Topsoil	TAv	40	MZCL	0	GOOD	19		6	40	40	19	100	0	0	760			6	40	40	19	100	0	0	760			
		EAv	N/A						6	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	25	SZL	0	MODERATE	17	11	40	65	10	17	100	0	0	170			40	65	25	17	100	0	0	425			
		EAv	N/A						40	65	15	11	100	0	0	165			N/A										
	Subsoil 2	TAv	55	SL	0	MODERATE	15	11	65	120	0	15	100	0	0	0			65	120	5	15	100	0	0	75			
		EAv	N/A						65	120	55	11	100	0	0	605	170	59	N/A								126	22	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
29	Topsoil	TAv	35	SZL	0	GOOD	19		7	35	35	19	100	0	0	665			7	35	35	19	100	0	0	665			
		EAv	N/A						7	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	SZL	0	GOOD	19	13	35	65	15	19	100	0	0	285			35	65	30	19	100	0	0	570			
		EAv	N/A						35	65	15	13	100	0	0	195			N/A										
	Subsoil 2	TAv	55	SL	0	MODERATE	15	11	65	120	0	15	100	0	0	0			65	120	5	15	100	0	0	75			
		EAv	N/A						65	120	55	11	100	0	0	605	175	64	N/A								131	27	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
30	Topsoil	TAv	35	MZCL	0	GOOD	19		7	35	35	19	100	0	0	665			7	35	35	19	100	0	0	665			
		EAv	N/A						7	35	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	30	SZL	0	GOOD	19	13	35	65	15	19	100	0	0	285			35	65	30	19	100	0	0	570			
		EAv	N/A						35	65	15	13	100	0	0	195			N/A										
	Subsoil 2	TAv	55	SL	0	GOOD	17	13	65	120	0	17	100	0	0	0			65	120	5	17	100	0	0	85			
		EAv	N/A						65	120	55	13	100	0	0	715	186	75	N/A								132	28	1
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										
31	Topsoil	TAv	40	MZCL	0	GOOD	19		7	40	40	19	100	0	0	760			7	40	40	19	100	0	0	760			
		EAv	N/A						7	40	0	0	100	0	0	0			N/A										
	Subsoil 1	TAv	80	HZCL	0	POOR	12	6	40	120	10	12	100	0	0	120			40	120	30	12	100	0	0	360			
		EAv	N/A						40	120	70	6	100	0	0	420			N/A										
	Subsoil 2	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0	130	19	N/A								112	8	2
	Subsoil 3	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Subsoil 4	TAv							120	120	0	0	100	0	0	0			120	120	0	0	100	0	0	0			
		EAv	N/A						120	120	0	0	100	0	0	0			N/A										
	Stones	N/A	N/A			N/A			N/A										N/A										

Appendix 20.2 Proposed Permanent Access Road Agricultural Land Classification

Soil Profiles

Description of Soil Profiles

Table Error! No text of specified style in document.**.1 Legend for Soil Profile Terminology**

Terminology	Description
Horizons	number of different horizons identified within the profile
Depth	depth to the bottom of the (horizon number) horizon in cm
Soil Type	mineral (M) or organic-mineral (OM)/peaty (P) texture
Texture	C - clay, ZC - silty clay, SC - sandy clay, CL - clay loam, SCL – sandy clay loam, ZCL - silty clay loam, SL - sandy loam, LS - loamy sand, S - sand). - Abbreviations M and H medium and heavy texture (M <27 %, H > 27 % Clay)
Hue	Munsell colour hue
Value	Munsell colour value
Chroma	Munsell colour chroma
Mottling Abundance	presence of >2 % mottling, followed by Munsell colour (value and chroma) of the mottles
Ped faces different colour	colour of ped faces different from the main horizon colour
Biopores	'yes' if >0.5 % biopores greater than 0.5 mm diameter present
Stones >2 cm	Percentage of 2 – 6 cm diameter stones
Stones > 6 cm	Percentage of > 6 cm diameter stones
Structure	Structure type; sg - single grain; gr – granular; sab - subangular blocky; ab - angular blocky; pr – prismatic; pl – platy; mas – massive
Development	How well the structure is developed; w – weak; m – moderate; s – strong
strength	Soil consistence; l – loose; vf - very friable; fr – friable; fir – firm; vfir - very firm; exfir - extremely firm; exhd - extremely hard

Table 1.2: Permanent Access Road Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
1	1	25		ZC	10YR	5	2	0				no				yes	0	0	SAB	M	C	FR
	2	55		ZC	2.5Y	3	2	20	10Y	4	1	no				yes	0	0	AB	M	C	FIR
	3	120		ZC	7.5YR	4	4	40	10Y	4	1	no				yes	0	0	AB	M	VC	FIR
2	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	AB	W	C	FIR
	2	55		ZC	2.5Y	3	2	20	10Y	4	1	yes	10Y	4	1	yes	0	0	AB	M	C	FIR
	3	120		ZC	7.5YR	4	4	40	10Y	4	1	yes	10Y	4	1	yes	0	0	AB	M	VC	FIR
3	1	30		ZC	10YR	5	3	0				no				yes	0	0	SAB	S	M	FR
	2	60		ZC	10YR	5	2	40	10YR	4	1	no				yes	0	0	PR	M	C	FIR
	3	100		ZC	10YR	5	1	20	7.5YR	5	6	no				yes	0	0	PR	W	C	VFIR
4	1	37		ZC	2.5Y	3	2	0				no				yes	0	0	SAB	M	C	VFR
	2	50		ZC	7.5YR	4	4	40	5Y	5	1	no				yes	0	0	AB	S	C	FIR
	3	70		ZC	10YR	5	2	20	10YR	4	6	no				yes	0	0	AB	S	C	FR
	4	120		ZC	7.5YR	4	4	20	5GY	5	1	yes	7.5YR	5	2	yes	0	0	PR	S	C	FIR
5	1	30		ZC	10YR	3	2	0				no				yes	0	0	SAB	M	C	FR
	2	70		MZCL	10YR	5	3	20	7.5YR	5	6	no				yes	0	0	AB	W	C	FIR
	3	120		ZC	10YR	5	2	40	7.5YR	5	6	no				yes	0	0	PR	W	C	FIR
6	1	30		ZC	2.5Y	3	2	0				no				yes	0	0	SAB	M	C	FR
	2	45		ZC	2.5Y	3	2	0				no				yes	0	0	AB	S	M	FIR

Table 1.2: Permanent Access Road Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
	3	60		ZC	2.5Y	3	3	40	5Y	5	1	no				yes	0	0	AB	S	C	FIR
	4	120		HZCL	7.5YR	4	4	20	7.5YR	4	1	yes	7.5YR	5	2	yes	0	0	AB	S	C	FIR
7	1	30		ZC	10YR	5	3	0				no				yes	0	0	SAB	S	M	FR
	2	120		ZC	10YR	5	2	40	7.5YR	5	6	no				yes	0	0	AB	W	C	FIR
8	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	SAB	M	VC	FIR
	2	45		ZC	2.5Y	3	2	2	10Y	5	1	no				yes	0	0	AB	S	VC	VFIR
	3	120		ZC	7.5YR	4	4	20	7.5YR	5	1	no				yes	0	0	AB	S	C	FIR
9	1	30		HZCL	2.5Y	3	2	0				no				yes	0	0	AB	S	C	FR
	2	120		ZC	2.5Y	3	2	40	10YR	5	2	no				yes	0	0	AB	W	C	FIR
10	1	25		ZC	10YR	4	2	0				no				yes	0	0	SAB	S	C	FR
	2	45		ZC	10YR	6	3	40	7.5YR	5	8	no				yes	0	0	AB	W	C	FR
	3	120		ZC	10YR	5	2	40	7.5YR	4	6	no				yes	0	0	AB	W	C	FR
11	1	30		ZC	10YR	4	2	0				no				yes	0	0	SAB	S	C	FR
	2	55		ZC	10YR	6	3	40	7.5YR	5	8	no				yes	0	0	AB	W	C	FR
	3	120		ZC	10YR	5	2	40	7.5YR	4	6	no				yes	0	0	AB	W	C	FR
12	1	35		ZC	10YR	4	2	0				no				yes	0	0	SAB	S	C	FR
	2	55		ZC	10YR	6	3	40	7.5YR	5	8	no				yes	0	0	AB	W	C	FR
	3	120		ZC	10YR	5	2	40	7.5YR	4	6	no				yes	0	0	AB	W	C	FR

Table 1.2: Permanent Access Road Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
13	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	SAB	S	C	FR
	2	45		ZC	2.5Y	3	2	20	7.5YR	4	4	no				yes	0	0	AB	S	C	FIR
	3	120		ZC	10YR	4	4	20	10YR	5	1	no				yes	0	0	AB	S	C	FIR
14	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	AB	W	C	FIR
	2	45		ZC	2.5Y	3	2	2	5Y	5	1	no				yes	0	0	AB	S	C	VFIR
	3	120		ZC	7.5YR	4	4	20	5Y	5	1	no				yes	0	0	AB	S	VC	VFIR
15	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	AB	W	C	FIR
	2	45		ZC	2.5Y	3	2	2	5Y	5	1	no				yes	0	0	AB	S	C	VFIR
	3	120		ZC	7.5YR	4	4	20	5Y	5	1	no				yes	0	0	AB	S	VC	VFIR
16	1	30		ZC	2.5Y	3	2	0				no				yes	0	0	AB	M	C	FR
	2	60		ZC	7.5YR	4	4	20	5Y	4	1	no				yes	0	0	AB	S	C	FIR
	3	120		ZC	7.5YR	4	3	20	7.5YR	5	1	no				yes	0	0	AB	S	C	FIR
17	1	30		ZC	10YR	3	2	0				no				yes	0	0	SAB	S	M	FIR
	2	80		ZC	2.5Y	5	2	40	7.5YR	4	4	no				yes	0	0	AB	S	C	FR
18	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	SAB	M	C	FR
	2	60		ZC	2.5Y	3	2	20	10Y	5	1	no				yes	0	0	AB	S	C	FIR
	3	120		ZC	7.5YR	4	4	20	7.5YR	5	1	no				yes	0	0	AB	S	VC	FIR
19	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	SAB	M	C	FR

Table 1.2: Permanent Access Road Soil Profile Description

Sample	Horizon	Depth	Soil Type	Tetxure	Hue	Vaue	Chroma	Mottling	Mottling Hue	Mottling Value	Mottling Chroma	Ped Face dif. colour	Ped face Hue	Ped Face Value	Ped Face Chroma	Biopores	Stones >2 cm	Stones > 6cm	Structure	Development	Ped Size	Strength
	2	40		ZC	10YR	3	2	2	10YR	5	1	no				yes	0	0	SAB	S	C	FR
	3	120		ZC	2.5Y	4	1	40	7.5YR	5	6	no				no	0	0	PR	S	C	VFIR
20	1	25		MCL	2.5Y	3	2	0				no				yes	0	0	AB	M	C	FR
	2	45		ZC	2.5Y	3	2	2	10YR	5	1	no				yes	0	0	AB	S	C	FR
	3	80		ZC	7.5YR	4	3	20	GLEY_1	5	5GY	no				yes	0	0	AB	S	C	FR
	4	120		ZC	GLEY_1	4	5GY	2	7.5YR	4	6	no				yes	0	0	PR	S	C	FIR
21	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	AB	M	C	FR
	2	45		ZC	2.5Y	3	2	2	10YR	5	1	no				yes	0	0	AB	S	C	FR
	3	120		ZC	7.5YR	4	3	20	GLEY_1	5	5GY	no				yes	0	0	AB	S	C	FR
22	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	AB	M	C	FR
	2	45		ZC	2.5Y	3	2	2	10YR	5	1	no				yes	0	0	AB	S	C	FR
	3	120		ZC	7.5YR	4	3	20	GLEY_1	5	5GY	no				yes	0	0	AB	S	C	FR
23	1	25		ZC	2.5Y	3	2	0				no				yes	0	0	AB	M	C	FR
	2	45		ZC	2.5Y	3	2	2	10YR	5	1	no				yes	0	0	AB	S	C	FR
	3	120		ZC	7.5YR	4	3	20	GLEY_1	5	5GY	no				yes	0	0	AB	S	C	FR

Table 1.3 combines the results of the classification for each limitation, providing the overall ALC assessment for each sample point.

Table 1.3: Permanent Access Road **ALC Assessment**

Sample	Climatic ALC	Gradient	Summer Flood Risk	Winter Flood Risk	Soil Depth	Topsoil stoniness	Wetness Class	Wetness limitation	Droughtiness	Topsoil texture	ALC Grade	Limited by	SPL criteria	Criteria for limitation(s)
1	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
2	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
3	1	1	1	1	1	1	I	2	3a	1	**3a**	Droughtiness	No SPL	Moisture Balance
4	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
5	1	1	1	1	1	1	I	2	3a	1	**3a**	Droughtiness	No SPL	Moisture Balance
6	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
7	1	1	1	1	1	1	I	2	3a	1	**3a**	Droughtiness	No SPL	Moisture Balance
8	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
9	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
10	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
11	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
12	1	1	1	1	1	1	I	3a	2	1	**3a**	Wetness	No SPL	Topsoil texture & Field Capacity days

Table 1.3: Permanent Access Road **ALC Assessment**

Sample	Climatic ALC	Gradient	Summer Flood Risk	Winter Flood Risk	Soil Depth	Topsoil stoniness	Wetness Class	Wetness limitation	Droughtiness	Topsoil texture	ALC Grade	Limited by	SPL criteria	Criteria for limitation(s)
13	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
14	1	1	1	1	1	1	I	3a	2	1	**3a**	Wetness	No SPL	Topsoil texture & Field Capacity days
15	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
16	1	1	1	1	1	1	I	3a	2	1	**3a**	Wetness	No SPL	Topsoil texture & Field Capacity days
17	1	1	1	1	1	1	I	3a	2	1	**3a**	Wetness	No SPL	Topsoil texture & Field Capacity days
18	1	1	1	1	1	1	I	3a	3a	1	**3a**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
19	1	1	1	1	1	1	II	3a	2	1	**3a**	Wetness	H3 > 18% clay, PR structure, gleyed	Topsoil texture & Field Capacity days
20	1	1	1	1	1	1	I	1	2	1	**2**	Droughtiness	No SPL	Moisture Balance
21	1	1	1	1	1	1	I	2	2	1	**2**	Wetness, Droughtiness	No SPL	Topsoil texture & Field Capacity days, Moisture balance
22	1	1	1	1	1	1	I	3a	2	1	**3a**	Wetness	No SPL	Topsoil texture & Field Capacity days
23	1	1	1	1	1	1	I	2	2	1	**2**	Wetness	No SPL	Topsoil texture & Field Capacity days

Droughtiness

Droughtiness Calculations

Table Error! No text of specified style in document.**.1 Droughtiness Abbreviations**	
Abbreviation	**Description**
TAv	Total amount of soil water available to plants, considered to be the volumetric soil water content between 0.05 and 15 bar suction or, in case of sands and loamy sands, 0.10 and 15 bar suction. These suctions approximate to the conditions of field capacity and wilting point (when the plants can extract no more moisture from the soil).
EAv	Easily available water, held in the soil between 0.05 and 2.0 bar suction, used for calculating cereal available water below 50 cm depth where root systems are less well developed, and the plant's ability to extract water is diminished.
Values of TAv and EAv are estimated for each horizon based on soil texture and structural condition according to the ALC guidelines (MAFF, 1988).	
AP	crop adjusted available water capacity, a measure of the quantity of water held in the soil profile which can be taken up by a specific crop.
MD	the moisture deficit term used in the ALC droughtiness assessment is a crop-related meteorological variable which represents the balance between rainfall and potential evapotranspiration calculated over a critical portion of the growing season.
MB	moisture balance: MB=AP-MD, MB for wheat and potatoes determines limitation by droughtiness

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
1	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	30	ZC		MODERATE	15	8	25	55	25	15	100	0	0	375			25	55	30	15	100	0	0	450			
		EAv							25	55	5	8	100	0	0	40													
	Subsoil 2	TAv	65	ZC		MODERATE	15	8	55	120	0	15	100	0	0	0			55	120	15	15	100	0	0	225			
		EAv							55	120	65	8	100	0	0	520	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
2	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	30	ZC		MODERATE	15	8	25	55	25	15	100	0	0	375			25	55	30	15	100	0	0	450			
		EAv							25	55	5	8	100	0	0	40													
	Subsoil 2	TAv	65	ZC		MODERATE	15	8	55	120	0	15	100	0	0	0			55	120	15	15	100	0	0	225			
		EAv							55	120	65	8	100	0	0	520	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
3	Topsoil	TAv	30	ZC		GOOD	17		0	30	30	17	100	0	0	510			0	30	30	17	100	0	0	510			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	30	ZC		POOR	12	7	30	60	20	12	100	0	0	240			30	60	30	12	100	0	0	360			
		EAv							30	60	10	7	100	0	0	70													
	Subsoil 2	TAv	40	ZC		POOR	12	7	60	100	0	12	100	0	0	0			60	100	10	12	100	0	0	120			
		EAv							60	100	40	7	100	0	0	280	110	-8									99	-15	3a
	Subsoil 3	TAv							100	0	-100	0	100	0	0	0			100	0	0	0	100	0	0	0			
		EAv							100	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
4	Topsoil	TAv	37	ZC		GOOD	17		0	37	37	17	100	0	0	629			0	37	37	17	100	0	0	629			
		EAv							0	37	0	0	100	0	0	0													
	Subsoil 1	TAv	13	ZC		MODERATE	15	8	37	50	13	15	100	0	0	195			37	50	13	15	100	0	0	195			
		EAv							37	50	0	8	100	0	0	0													
	Subsoil 2	TAv	20	ZC		MODERATE	15	8	50	70	0	15	100	0	0	0			50	70	20	15	100	0	0	300			
		EAv							50	70	20	8	100	0	0	160	138.4	20									112.4	-2	2
	Subsoil 3	TAv	50	ZC		MODERATE	15	8	70	120	0	15	100	0	0	0			70	120	0	15	100	0	0	0			
		EAv							70	120	50	8	100	0	0	400													
	Subsoil 4	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Stones																												
5	Topsoil	TAv	30	ZC		GOOD	17		0	30	30	17	100	0	0	510			0	30	30	17	100	0	0	510			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	40	MZCL		POOR	12	6	30	70	20	12	100	0	0	240			30	70	40	12	100	0	0	480			
		EAv							30	70	20	6	100	0	0	120													
	Subsoil 2	TAv	50	ZC		POOR	12	7	70	120	0	12	100	0	0	0			70	120	0	12	100	0	0	0			
		EAv							70	120	50	7	100	0	0	350	122	4									99	-15	3a
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
6	Topsoil	TAv	30	ZC		GOOD	17		0	30	30	17	100	0	0	510			0	30	30	17	100	0	0	510			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	15	ZC		MODERATE	15	8	30	45	15	15	100	0	0	225			30	45	15	15	100	0	0	225			
		EAv							30	45	0	8	100	0	0	0													
	Subsoil 2	TAv	15	ZC		MODERATE	15	8	45	60	5	15	100	0	0	75			45	60	15	15	100	0	0	225			
		EAv							45	60	10	8	100	0	0	80	149	31									113	-1	2
	Subsoil 3	TAv	60	HZCL		MODERATE	17	10	60	120	0	17	100	0	0	0			60	120	10	17	100	0	0	170			
		EAv							60	120	60	10	100	0	0	600													
	Subsoil 4	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Stones																												
7	Topsoil	TAv	30	ZC		GOOD	17		0	30	30	17	100	0	0	510			0	30	30	17	100	0	0	510			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	90	ZC		POOR	12	7	30	120	20	12	100	0	0	240			30	120	40	12	100	0	0	480			
		EAv							30	120	70	7	100	0	0	490													
	Subsoil 2	TAv							120	0	-120	0	100	0	0	0			120	0	-120	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0	124	6									99	-15	3a
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	120	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
8	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
9	Topsoil	TAv	30	HZCL		GOOD	19		0	30	30	19	100	0	0	570			0	30	30	19	100	0	0	570			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	90	ZC		MODERATE	15	8	30	120	20	15	100	0	0	300			30	120	40	15	100	0	0	600			
		EAv							30	120	70	8	100	0	0	560													
	Subsoil 2	TAv							120	0	-120	0	100	0	0	0			120	0	-120	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0	143	25									117	3	2
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	120	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
10	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
11	Topsoil	TAv	30	ZC		GOOD	17		0	30	30	17	100	0	0	510			0	30	30	17	100	0	0	510			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	25	ZC		MODERATE	15	8	30	55	20	15	100	0	0	300			30	55	25	15	100	0	0	375			
		EAv							30	55	5	8	100	0	0	40													
	Subsoil 2	TAv	65	ZC		MODERATE	15	8	55	120	0	15	100	0	0	0			55	120	15	15	100	0	0	225			
		EAv							55	120	65	8	100	0	0	520	137	19									111	-3	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
12	Topsoil	TAv	35	ZC		GOOD	17		0	35	35	17	100	0	0	595			0	35	35	17	100	0	0	595			
		EAv							0	35	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	35	55	15	15	100	0	0	225			35	55	20	15	100	0	0	300			
		EAv							35	55	5	8	100	0	0	40													
	Subsoil 2	TAv	65	ZC		MODERATE	15	8	55	120	0	15	100	0	0	0			55	120	15	15	100	0	0	225			
		EAv							55	120	65	8	100	0	0	520	138	20									112	-2	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
13	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
14	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
15	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
16	Topsoil	TAv	30	ZC		GOOD	17		0	30	30	17	100	0	0	510			0	30	30	17	100	0	0	510			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	30	ZC		MODERATE	15	8	30	60	20	15	100	0	0	300			30	60	30	15	100	0	0	450			
		EAv							30	60	10	8	100	0	0	80													
	Subsoil 2	TAv	60	ZC		MODERATE	15	8	60	120	0	15	100	0	0	0			60	120	10	15	100	0	0	150			
		EAv							60	120	60	8	100	0	0	480	137	19									111	-3	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
17	Topsoil	TAv	30	ZC		GOOD	17		0	30	30	17	100	0	0	510			0	30	30	17	100	0	0	510			
		EAv							0	30	0	0	100	0	0	0													
	Subsoil 1	TAv	50	ZC		MODERATE	15	8	30	80	20	15	100	0	0	300			30	80	40	15	100	0	0	600			
		EAv							30	80	30	8	100	0	0	240													
	Subsoil 2	TAv							80	0	-80	0	100	0	0	0			80	0	-80	0	100	0	0	0			
		EAv							80	0	0	0	100	0	0	0	105	-13									111	-3	3a
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	80	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
18	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	35	ZC		MODERATE	15	8	25	60	25	15	100	0	0	375			25	60	35	15	100	0	0	525			
		EAv							25	60	10	8	100	0	0	80													
	Subsoil 2	TAv	60	ZC		MODERATE	15	8	60	120	0	15	100	0	0	0			60	120	10	15	100	0	0	150			
		EAv							60	120	60	8	100	0	0	480	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
19	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	15	ZC		MODERATE	15	8	25	40	15	15	100	0	0	225			25	40	15	15	100	0	0	225			
		EAv							25	40	0	8	100	0	0	0													
	Subsoil 2	TAv	80	ZC		MODERATE	15	8	40	120	10	15	100	0	0	150			40	120	30	15	100	0	0	450			
		EAv							40	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
20	Topsoil	TAv	25	MCL		GOOD	18		0	25	25	18	100	0	0	450			0	25	25	18	100	0	0	450			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	35	ZC		MODERATE	15	8	45	80	5	15	100	0	0	75			45	80	25	15	100	0	0	375			
		EAv							45	80	30	8	100	0	0	240	134.5	16									112.5	-2	2
	Subsoil 3	TAv	40	ZC		POOR	12	7	80	120	0	12	100	0	0	0			80	120	0	12	100	0	0	0			
		EAv							80	120	40	7	100	0	0	280													
	Subsoil 4	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
21	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
22	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
23	Topsoil	TAv	25	ZC		GOOD	17		0	25	25	17	100	0	0	425			0	25	25	17	100	0	0	425			
		EAv							0	25	0	0	100	0	0	0													
	Subsoil 1	TAv	20	ZC		MODERATE	15	8	25	45	20	15	100	0	0	300			25	45	20	15	100	0	0	300			
		EAv							25	45	0	8	100	0	0	0													
	Subsoil 2	TAv	75	ZC		MODERATE	15	8	45	120	5	15	100	0	0	75			45	120	25	15	100	0	0	375			
		EAv							45	120	70	8	100	0	0	560	136	18									110	-4	2
	Subsoil 3	TAv							120	0	-120	0	100	0	0	0			120	0	0	0	100	0	0	0			
		EAv							120	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
24	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0	0	-118									0	-114	4
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
25	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0	0	-118									0	-114	4
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
26	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
27	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
28	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
29	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
30	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes								ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
31	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0	0	-118									0	-114	4
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
32	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0	0	-118									0	-114	4
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
33	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0	0	-118									0	-114	4
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
34	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0	0	-118									0	-114	4
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
35	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0	0	-118									0	-114	4
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat											AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
36	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
37	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
38	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
39	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
40	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes								ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat	AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes	AP(potato) - MD(potato)	ALC limited to
41	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	-118	0	0	0	0	100	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 1	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 2	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 3	TAv							0	0	0	0	100	0	0	0		0	0	70	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 4	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Stones																										
42	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	-118	0	0	0	0	100	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 1	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 2	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 3	TAv							0	0	0	0	100	0	0	0		0	0	70	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 4	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Stones																										
43	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	-118	0	0	0	0	100	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 1	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 2	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 3	TAv							0	0	0	0	100	0	0	0		0	0	70	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 4	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Stones																										
44	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	-118	0	0	0	0	100	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 1	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 2	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 3	TAv							0	0	0	0	100	0	0	0		0	0	70	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 4	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Stones																										
45	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	-118	0	0	0	0	100	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 1	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 2	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 3	TAv							0	0	0	0	100	0	0	0		0	0	70	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Subsoil 4	TAv							0	0	0	0	100	0	0	0		0	0	0	0	100	0	0	0		
		EAv							0	0	0	0	100	0	0	0											
	Stones																										

			Data inputs						Droughtiness																				
									AP wheat												AP potatoes									ALC
Survey Point	Horizon	TAv / EAv	Horizon thickness	Texture	% stones	Structural condition	TAv %	EAv %	Start depth	End depth	Horizon thickness	TAv / EAv	% non stone	TAv / EAv stones	% stones	AP wheat		AP(wheat) - MD(wheat)	Start depth	End depth	Horizon thickness	TAv top/sub soil	% non-stone	TAv stones	% stone	AP potatoes		AP(potato) - MD(potato)	ALC limited to
46	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
47	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
48	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
49	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Stones																												
50	Topsoil	TAv				GOOD			0	0	0	0	100	0	0	0	0	-118	0	0	0	0	100	0	0	0	0	-114	4
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 1	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 2	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 3	TAv							0	0	0	0	100	0	0	0			0	0	70	0	100	0	0	0			
		EAv							0	0	0	0	100	0	0	0													
	Subsoil 4	TAv							0	0	0	0	100	0	0	0			0	0	0	0	100	0	0	0			
		EAv			.				0	0	0	0	100	0	0	0													
	Stones																												

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