

# Winter Cover Crop Plots

## Willott Farms



# Willott Farm Winter Cover Crop Plots



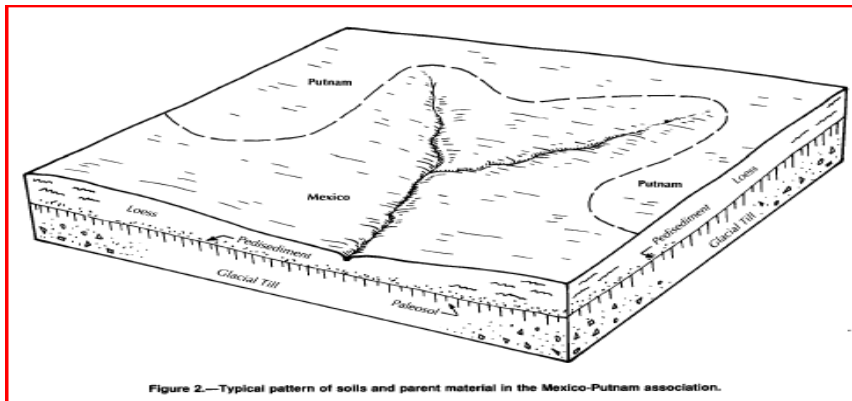
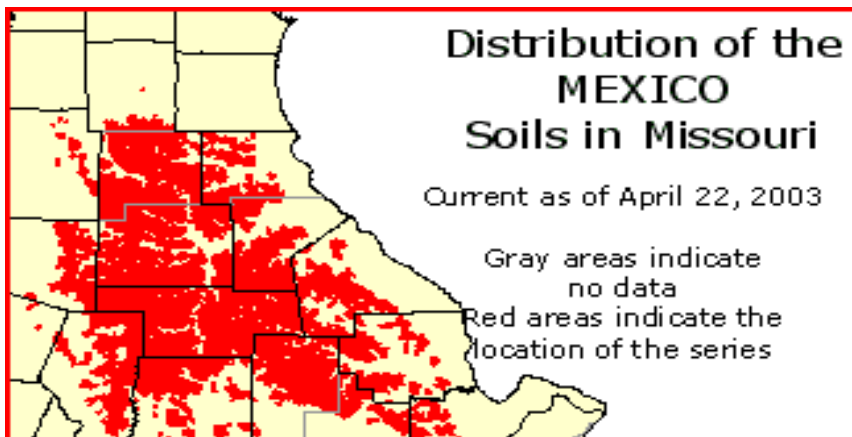


Figure 2.—Typical pattern of soils and parent material in the Mexico-Putnam association.



## Distribution of the MEXICO Soils in Missouri

Current as of April 22, 2003

Gray areas indicate no data  
Red areas indicate the location of the series

## Mexico Series

The Mexico series consists of very deep, somewhat poorly drained, very slowly permeable soils on broad interfluvial divides in the uplands. These soils formed in loess and in the underlying pedisements. Slopes range from 1 to 3 percent.

Typical pedon of Mexico silt loam, 1 to 3 percent slopes, 500 feet east of the northwest corner of sec. 11, T. 50 N., R. 10 W.

**Ap**—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; few fine and many very fine roots; moderately acid (pH 6.0); abrupt smooth boundary.

**B/E**—7 to 11 inches; dark grayish brown (10YR 4/2) and red (2.5YR 4/6) silty clay loam (Bt); common thin coatings of grayish brown (10YR 5/2) silt loam (E) on faces of peds; weak very fine subangular blocky structure; friable; common very fine roots; strongly acid (pH 5.1); abrupt smooth boundary.

**Bt**—11 to 17 inches; mottled dark grayish brown (10YR 4/2), red (2.5YR 4/6), and yellowish brown (10YR 5/6) silty clay; moderate medium subangular blocky structure; very firm; common very fine roots; common distinct clay films on faces of peds; strongly acid (pH 5.1); gradual smooth boundary.

**Btg1**—17 to 24 inches; grayish brown (10YR 5/2) silty clay; common fine prominent yellowish brown (10YR 5/6) mottles; moderate fine subangular blocky structure; very firm; common very fine roots; common distinct clay films on faces of peds; strongly acid (pH 5.4); clear smooth boundary.

**Btg2**—24 to 36 inches; grayish brown (10YR 5/2) silty clay; common fine prominent yellowish brown (10YR 5/6) and dark brown (7.5YR 4/4) mottles; weak fine subangular blocky structure; firm; common very fine roots; few faint clay films on faces of peds; few stains of manganese oxide on faces of peds; few fine rounded concretions of iron and manganese oxide; strongly acid (pH 5.5); clear smooth boundary.

**BCg**—36 to 48 inches; mottled grayish brown (10YR 5/2), dark yellowish brown (10YR 4/6), and yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure; firm; few very fine roots; slightly acid (pH 6.2); abrupt smooth boundary.

**2Cg**—48 to 60 inches; light brownish gray (10YR 6/2) clay loam; many medium prominent yellowish brown (10YR 5/6) mottles; massive; firm; slightly acid (pH 6.3).

Depth to the 2Cg horizon ranges from 30 to 60 inches. The Ap horizon has value and chroma of 2 or 3. It is silt loam or silty clay loam. The upper part of the Bt horizon has value of 4 or 5 and chroma of 1 or 2. It is silty clay or silty clay loam. The lower part of the Bt horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 or 2. The 2Cg horizon has value of 5 or 6 and chroma of 1 or 2. It is silty clay loam or clay loam.

Soil name and map symbol	Depth	Clay		Moist bulk density g/cc	Permeability In/hr	Available water capacity In/in	Soil reaction pH
		In	Pct				
27B----- Mexico	0-9	15-27	1.20-1.40	0.6-2.0	0.22-0.24	5.1-7.3	
	9-13	35-50	1.25-1.45	0.2-0.6	0.12-0.16	4.5-6.0	
	13-29	50-60	1.25-1.45	<0.06	0.08-0.12	4.5-6.0	
	29-52	35-50	1.25-1.45	0.2-0.6	0.12-0.16	5.1-7.3	
	52-60	27-50	1.25-1.45	<0.6	0.12-0.18	5.1-7.3	

## **RANGE IN CHARACTERISTICS:**

Depth to top of the argillic horizon: 13 to 33 centimeters (5 to 13 inches)

Thickness of silt loam surface layers: 13 to 43 centimeters (5 to 17 inches)

Depth to top of the claypan: 18 to 46 centimeters (7 to 18 inches)

Particle-size control section: averages 38 to 50 percent clay, with at least one horizon having 45 to 60 percent

Depth to lithologic discontinuity (loamy sediments or 2Btg horizon): 76 to 152 centimeters (30 to 60 inches) in uneroded pedons and ranges from 71 to 152 centimeters (28 to 60 inches) in eroded pedons

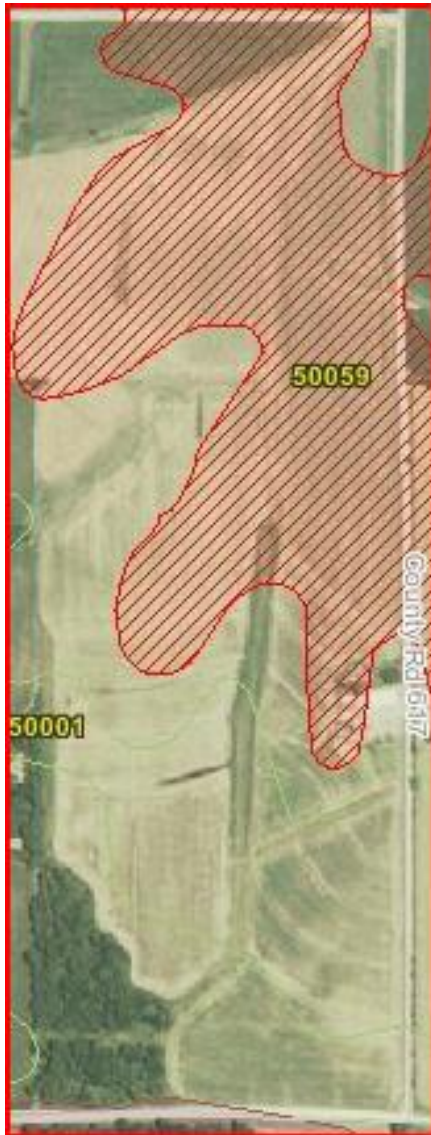
Depth to till (3Btg horizon), where present: 152 to 203 centimeters (60 to 80 inches)

Depth to base of the argillic horizon: greater than 203 centimeters (80 inches)

Solum thickness: greater than 203 centimeters (80 inches)

Depth to carbonates: greater than 203 centimeters (80 inches)

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## Soil Taxonomy Order

1862053, 00750059

Rec #	<u>1</u>
Map Unit Key	1862053
Map Unit ID	00750059
Map Unit Symbol	50059
Map Unit Name	Mexico silt loam, 1 to 4 percent slopes, eroded
Component Name	Mexico
Component Pct (Representative)	85
Component Kind	Series
Order	Alfisols
Suborder	Aqualfs
Great Group	Epiaqualfs
Subgroup	Vertic Epiaqualfs
Family	Fine, smectitic, mesic Vertic Epiaqualfs

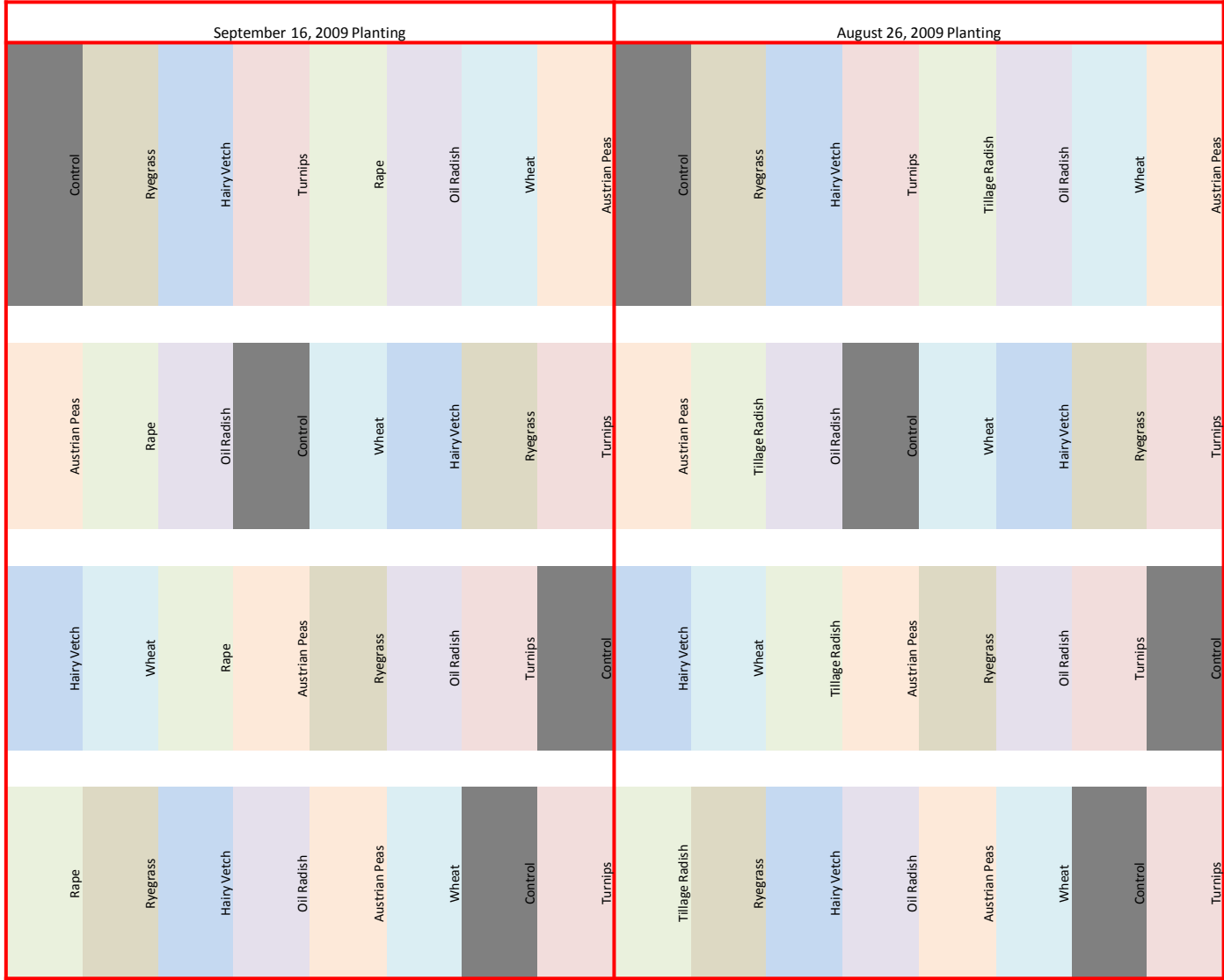
# Putnam silt loam



Soil Taxonomy Order	
888717, 00750012	
Rec #	<u>1</u>
Map Unit Key	888717
Map Unit ID	00750012
Map Unit Symbol	50012
Map Unit Name	Putnam silt loam, 0 to 1 percent slopes
Component Name	Putnam
Component Pct (Representative)	90
Component Kind	Series
Order	Alfisols
Suborder	Aqualfs
Great Group	Albaqualfs
Subgroup	Vertic Albaqualfs
Family	Fine, smectitic, mesic Vertic Albaqualfs

Disk Broadcast (2)

Ditch



Range A

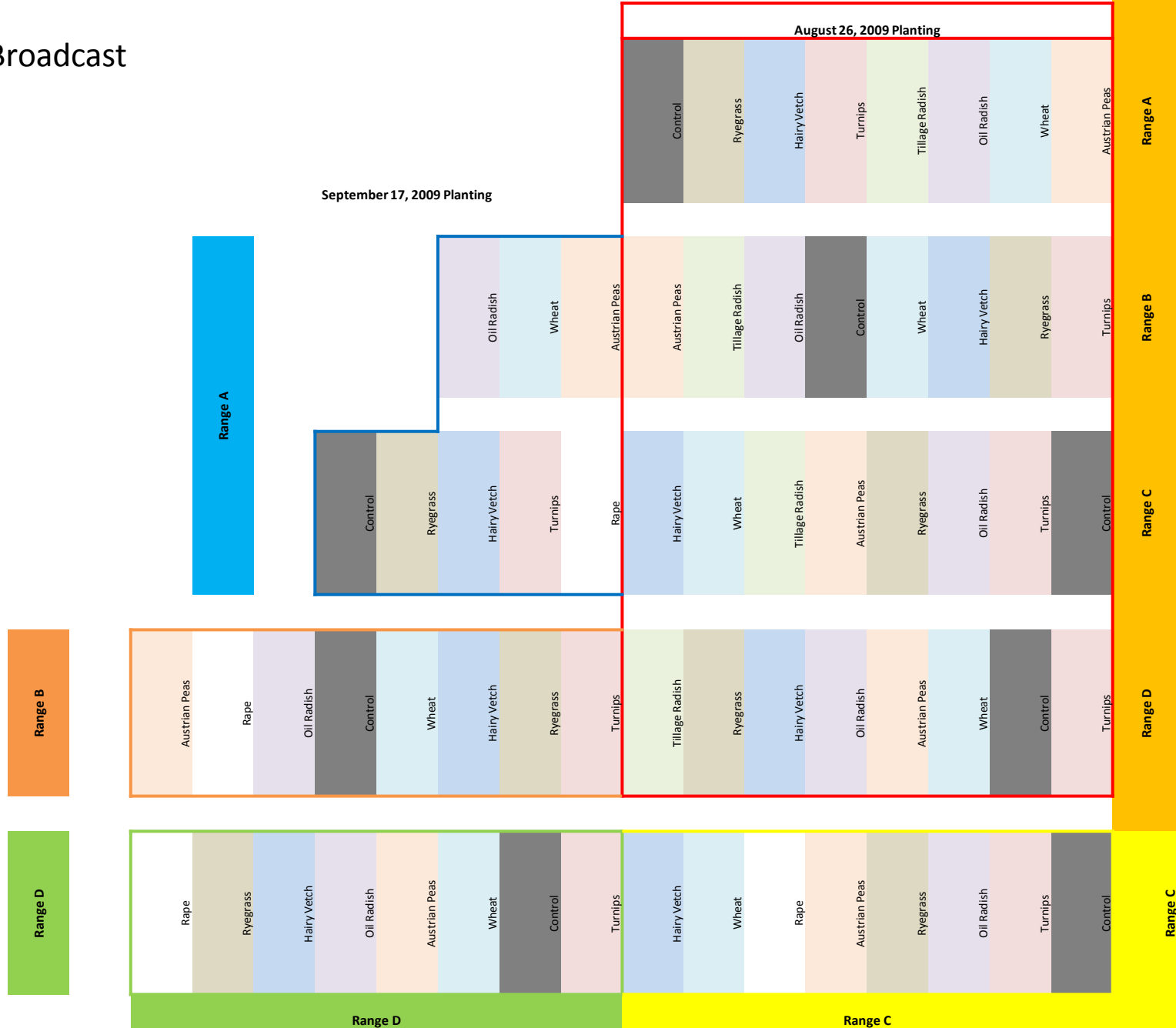
Range B

Range C

Range D

Road

# Fallow Broadcast



Aug. 26 Fallow Site Plants per Sq. Ft.

Aug. 27 Disked Site Plants per Sq. Ft.

Species	Sept. 17	Ht. In.	Sept. 29	Ht. In.	Ht. In.	Species	Sept. 17	Ht. In.	Sept. 29	Ht. In.	Ht. In.
<b>Austrian Peas</b>						<b>Austrian Peas</b>					
range A	0.4	2.0	0.6	1.0		range A	0	0.0	0.4	2.0	
range b	0.0	0.0	0.0	0.0		range b	0.2	3.0	0.3	1.0	
range C	0.0	0.0	0.2	4.0		range C	0.6	2.0	0.4	1.0	
range D	0.0	0.0	0.4	5.0		range D	0	0.0	0.1	1.0	
average	<b>0.1</b>		<b>0.3</b>		<b>0.0</b>	average	<b>0.2</b>		<b>0.3</b>		<b>0.0</b>
<b>Wheat</b>						<b>Wheat</b>					
range A	0.0	0.0	0.0	0.0		range A	0		0.0		
range b	0.0	0.0	0.0	0.0		range b	0		0.0		
range C	0.0	0.0	0.0	0.0		range C	0		0.1		
range D	0.0	0.0	0.0	0.0		range D	0		0.0		
average	<b>0.0</b>		<b>0.0</b>		<b>0.0</b>	average	<b>0.0</b>		<b>0.0</b>		<b>0.0</b>
<b>Oil Radish</b>						<b>Oil Radish</b>					
range A	5.8	4.0	5.4	3.5		range A	1.4	3.0	1.4	6.0	
range b	3.0	3.5	2.8	5.0		range b	0	0.0	0.6	4.0	
range C	4.4	3.5	2.0	5.0		range C	1.6	3.0	0.6	0.0	
range D	2.6	3.5	1.0	5.0		range D	0.4	1.0	1.0	0.0	
average	<b>4.0</b>		<b>2.8</b>		<b>0.00</b>	average	<b>0.9</b>		<b>0.9</b>		<b>0.0</b>
<b>Tillage Radish</b>						<b>Tillage Radish</b>					
range A	4.2	3.0	3.8	8.0		range A	2.2	2.0	1.2	8.0	
range b	4.4	5.0	3.6	5.0		range b	0.4	1.0	1.0	5.0	
range C	5.8	6.0	1.8	9.0		range C	0.2	1.0	0.0	6.0	
range D	1.0	6.0	3.1	9.0		range D	0	0.0	0.0	0.0	
average	<b>3.9</b>		<b>3.1</b>		<b>0.0</b>	average	<b>0.7</b>		<b>0.6</b>		<b>0.0</b>
<b>Turnips</b>						<b>Turnips</b>					
range A	9.0	3.5	5.8	6.0		range A	2.4	1.5	1.0	6.0	
range b	8.2	3.5	4.4	8.0		range b	2.6	2.0	4.0	6.0	
range C	7.4	3.0	2.6	7.0		range C	3	3.0	4.8	8.0	
range D	6.8	3.5	4.0	8.0		range D	2.8	4.0	2.8	6.0	
average	<b>7.9</b>		<b>4.2</b>		<b>0.0</b>	average	<b>2.7</b>		<b>3.2</b>		<b>0.0</b>
<b>Hairy Vecth</b>						<b>Hairy Vecth</b>					
range A	1.8	3.0	2.5	2.0		range A	0.2	2.0	1.9	3.0	
range b	2.4	4.0	2.5	8.0		range b	0	0.0	0.0	0.0	
range C	2.2	3.0	1.7	3.0		range C	0.2	2.0	1.1	1.0	
range D	1.6	3.0	2.8	3.0		range D	1.6	2.0	1.8	2.0	
average	<b>2.0</b>		<b>2.4</b>		<b>0.0</b>	average	<b>0.5</b>		<b>1.2</b>		<b>0.0</b>
<b>Ryegrass</b>						<b>Ryegrass</b>					
range A	4.2	1.0	3.4	6.0		range A	0.4	1.5	1.9	1.0	
range b	1.6	2.0	4.4	6.0		range b	0.8	2.0	1.8	1.0	
range C	6.6	4.0	4.2	5.0		range C	0	0.0	2.1	1.0	
range D	1.2	2.0	2.8	4.0		range D	0.2	2.0	1.2	1.0	
average	<b>3.4</b>		<b>3.7</b>		<b>0.0</b>	average	<b>0.4</b>		<b>1.8</b>		<b>0.0</b>

