

SOIL INTERPRETATIONS FOR PASTURELAND
AND HAYLAND USE

PASTURE AND HAYLAND SUITABILITY GROUPS	YIELDS		SPECIES Adapted to Entire State Unless Indicated Otherwise
	Animal Unit Months 1/ (AUMs)	Hay Dry Matter Equiv. (Tons)	
Group A - Soils having few limitations for the growth of climatically adapted plants.			
Group A-1			
Deep, well drained or moderately well drained soils. Surface textures range from moderately coarse to fine. Available water capacity ranges from moderate to very high. Slopes range from 0 to 18 percent.	4.5	2.7	Kentucky bluegrass
	7.0	4.2	Tall fescue
	6.7	4.0	Orchardgrass
	6.7	4.0	Bromegrass ₂ /
	5.3	3.2	Timothy
	7.0	4.2	Alfalfa + grass ₃ /
	5.3	3.2	Birdsfoot trefoil + grass _{3/4}
	5.0	3.0	Switchgrass
5.0	3.0	Big Bluestem	
6.7	4.0	Indiangrass	
Group A-2			
Deep, well drained or moderately well drained soils. Surface textures range from moderately coarse to fine. Available water capacity ranges from moderate to very high. Slopes range 18 to 25 percent.	4.0	2.4	Kentucky bluegrass
	6.3	3.8	Tall fescue
	6.0	3.6	Orchardgrass
	6.0	3.6	Bromegrass ₂ /
	4.8	2.9	Timothy
	6.3	3.8	Alfalfa + grass ₃ /
	4.8	2.9	Birdsfoot trefoil + grass _{3/4}
	4.5	2.7	Switchgrass
4.5	2.7	Big Bluestem	
6.0	3.6	Indiangrass	
Group A-3			
Deep, well drained or moderately well drained soils. Surface texture ranges from moderately coarse to fine. Available water capacity ranges from moderate to very high. Slopes range from 25 to 40 percent.	1.7	—	Kentucky bluegrass
	3.0	—	Tall fescue
	2.7	—	Orchardgrass
Group A-4			
Deep or moderately deep, well drained or moderately well drained soils that have stones or boulders on the surface that is extensive enough to preclude hay making equipment. Surface textures range from coarse to moderately fine. Available water capacity ranges from moderate to very low. Slopes range from 0 to 40 percent.	2.0	—	Kentucky bluegrass

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	Animal Unit Months 1/ (AUMs)	Hay Dry Matter Equiv. (Tons)	
<u>Group A-5</u>			
Deep, well drained or moderately well drained soils that are subject to brief flooding. Surface textures range from moderately coarse to moderately fine. Available water capacity ranges from low to very high. Slopes range from 0 to 15 percent.	4.5	2.7	Kentucky bluegrass
	7.0	4.2	Tall fescue
	6.7	4.0	Orchardgrass
	6.7	4.0	Bromegrass ^{2/}
	5.3	3.2	Timothy
	6.0	3.6	Red clover + grass ^{3/}
	5.3	3.2	Birdsfoot trefoil + grass ^{3/4}
	5.0	3.0	Switchgrass
	5.0	3.0	Big Bluestem
6.7	4.0	Indiangrass	
<u>Group A-6</u>			
Deep, well drained or moderately well drained soils that are subject to frost action. Surface textures range from moderately coarse to moderately fine. Available water capacity ranges from low to very high. Slopes range from 0 to 18 percent.	4.5	2.7	Kentucky bluegrass
	7.0	4.2	Tall fescue
	6.7	4.0	Orchardgrass
	6.7	4.0	Bromegrass ^{2/}
	5.3	3.2	Timothy
	5.5	3.3	Red clover + grass ^{3/}
	5.3	3.2	Birdsfoot trefoil + grass ^{3/4}
	5.0	3.0	Switchgrass
	5.0	3.0	Big Bluestem
6.7	4.0	Indiangrass	

^{1/} See page 24. This section for the percent estimate yields for different species by month.

^{2/} Adaptation: Northern Ohio - Good; Central Ohio - Good; Southern Ohio - Poor.

^{3/} Assumes tall grasses such as orchardgrass, Tall fescue or Bromegrass, but no Kentucky bluegrass.

^{4/} Adaptation: Northern Ohio - Good; Central Ohio - Fair; Southern Ohio - Poor.

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PASTURE AND HAYLAND SUITABILITY GROUPS	YIELDS		SPECIES Adapted to Entire State Unless Indicated Otherwise
	Animal Unit Months ^{1/} (AUMs)	Hay Dry Matter Equiv. (Tons)	
<u>Group B - Soils that limit growth and production due to droughtiness.</u>			
<u>Group B-1</u>			
Deep, well drained or moderately well drained soils. Surface textures range from coarse to moderately fine. Available water capacity is low or very low. These soils are sandy or skeletal in the subsoil. Slopes range from 0 to 25 percent.	3.5	2.1	Kentucky bluegrass
	6.0	3.6	Tall fescue
	5.7	3.4	Orchardgrass
	4.3	2.6	Timothy
	5.7	3.4	Bromegrass ^{2/}
	4.3	2.6	Birdsfoot trefoil + grass ^{3/4}
	6.0	3.6	Alfalfa + grass ^{3/}
	4.3	2.6	Switchgrass
	4.3	2.6	Big Bluestem
	5.7	3.4	Indiangrass
<u>Group B-2</u>			
Deep, well drained soils. Surface textures range from coarse to moderately fine. Available water capacity is low or very low. These soils are sandy or skeletal in the subsoil. Slopes range from 25 to 40 percent.	1.0	—	Kentucky bluegrass
	1.8	—	Tall fescue
	1.6	—	Orchardgrass
<u>Group B-3</u>			
Deep, excessively drained to somewhat poorly drained soils that are subject to brief flooding. Surface textures range from coarse to medium. These soils are sandy or skeletal in the subsoil. Available water capacity ranges from very low to moderate. Slopes range from 0 to 6 percent.	3.6	2.2	Kentucky bluegrass
	5.6	3.4	Tall fescue
	5.4	3.2	Orchardgrass
	5.4	3.2	Bromegrass ^{2/}
	4.2	2.6	Timothy
	4.8	2.9	Red clover + grass ^{3/}
	4.2	2.6	Birdsfoot trefoil + grass ^{3/4}
	4.0	2.4	Switchgrass
	4.0	2.4	Big Bluestem
5.4	3.2	Indiangrass	

^{1/} See page 16.

^{2/} Adaptation: Northern Ohio - Good; Central Ohio - Good; Southern Ohio - Poor.

^{3/} Assumes tall grasses such as orchardgrass, Tall fescue or Bromegrass, but not Kentucky bluegrass.

^{4/} Adaptation: Northern Ohio - Good; Central Ohio - Fair; Southern Ohio - Poor.

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PASTURE AND HAYLAND SUITABILITY GROUPS	YIELDS		SPECIES Adapted to Entire State Unless Indicated Otherwise
	Animal Unit Months 1/ (AUMs)	Hay Dry Matter Equiv. (Tons)	
Group B-4			
Deep, well drained reclaimed mine soils. Surface textures range from medium to moderately fine. Available water capacity is low or very low. Slopes range from 0-25 percent. The substratum contains a high percentage of coarse fragments. Rooting zone is 20-30 inches deep.	1.7	1.0	Kentucky bluegrass
	2.9	1.7	Tall fescue
	2.7	1.6	Orchardgrass
	2.0	1.2	Birdsfoot trefoil + grass
			Timothy
	2.7	1.6	Bromegrass
	3.2	2.0	Alfalfa + grass
	2.2	1.3	Switchgrass
	2.9	1.7	Big bluestem
	2.2	1.3	Indiangrass

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PASTURE AND HAYLAND SUITABILITY GROUPS	YIELDS		SPECIES Adapted to Entire State Unless Indicated Otherwise
	Animal Unit Months 1/ (AUMs)	Hay Dry Matter Equiv. (Tons)	
<u>Group C</u>			
Soils that are normally wet due to high water tables or soils that are saturated during the growing season.			
<u>Group C-1</u>			
Deep, somewhat poorly drained, poorly drained or very poorly drained soils. Surface textures range from moderately coarse to fine. Available water capacity ranges from moderate to very high. These soils normally respond well to subsurface drainage. Slopes range from 0 to 6 percent.	5.3 7.7 7.3 7.3 5.8 6.6 5.7 5.5 5.5 7.4	3.2 4.6 4.4 4.4 3.5 4.0 3.4 3.3 3.3 4.4	Kentucky bluegrass Tall fescue Orchardgrass Bromegrass ^{2/} Timothy Red clover + grass ^{3/} Birdsfoot trefoil + grass ^{3/4} Switchgrass Big Bluestem Indiangrass
<u>Group C-2</u>			
Deep or moderately deep, somewhat poorly drained, poorly drained or very poorly drained soils. Surface texture ranges from moderately coarse to fine. Available water capacity ranges from moderate to very high. Effectiveness of subsurface drainage is usually limited by permeability of the subsoil or the landscape position of the soil. Slopes range from 0 to 12 percent.	4.5 7.0 6.7 6.7 5.3 6.0 5.3 5.0	2.7 4.2 4.0 4.0 3.2 3.6 3.2 3.0	Kentucky bluegrass Tall fescue Orchardgrass Bromegrass ^{2/} Timothy Red clover + grass ^{3/} Birdsfoot trefoil + grass ^{3/4} Switchgrass
<u>Group C-3</u>			
Deep, somewhat poorly drained, poorly drained, or very poorly drained soils that are subject to flooding. Surface textures range from medium to fine. Available water capacity ranges from moderate to very high. Slopes range from 0 to 3 percent.	5.3 7.7 7.3 7.3 5.8 6.6 5.7 5.5	3.2 4.6 4.4 4.4 3.5 4.0 3.4 3.3	Kentucky bluegrass Tall fescue Orchardgrass Bromegrass ^{2/} Timothy Red clover + grass ^{3/} Birdsfoot trefoil + grass ^{3/4} Switchgrass

^{1/} See page 16.

^{2/} Adaptation: Northern Ohio - Good; Central Ohio - Good; Southern Ohio - Poor.

^{3/} Assumes tall grasses such as orchardgrass, Tall fescue or Bromegrass, but no Kentucky bluegrass.

^{4/} Adaptation: Northern Ohio - Good; Central Ohio - Fair; Southern Ohio - Poor.

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PASTURE AND HAYLAND SUITABILITY GROUPS	YIELDS		SPECIES Adapted to Entire State Unless Indicated Otherwi
	Animal Unit Months 1/ (AUMs)	Hay Dry Matter Equiv. (Tons)	
<u>Group D - Soils which are classified as organic (histosols).</u>			
<u>Group D-1</u>			
Deep, very poorly drained soils formed entirely or partially in organic material. Available water capacity is high or very high. Slope is 0 to 2 percent.			(Normally this land will be in high value crops and not normally used for forage production.)
<u>Group E - Soils that have a restrictive root zone of less than 20 inches.</u>			
<u>Group E-1</u>			
Well drained or poorly drained soils that have a restricted root zone of less than 20 inches. Surface textures range from moderately coarse to fine. Available water capacity is very low or low. Slopes range from 0 to 25 percent.	1.7	1.0	Kentucky bluegrass
	2.9	1.7	Tall fescue
	2.7	1.6	Orchardgrass
	2.7	1.6	Bromegrass ^{2/}
	2.0	1.2	Timothy
	2.9	1.7	Red clover + grass ^{3/}
	2.0	1.2	Birdsfoot trefoil + grass ^{3/4}
	2.2	1.3	Switchgrass
	2.2	1.3	Indiangrass
2.9	1.7	Big Bluegrass	
<u>Group E-2</u>			
Well drained soils that have a restricted root zone of less than 20 inches. Surface textures range from moderately coarse to fine. Available water capacity is very low to low. Slopes range from 25 to 40 percent.	1.3	--	Kentucky bluegrass
	2.5	--	Tall fescue
	2.3	--	Orchardgrass
<u>Group E-3</u>			
Well drained soils that restrict root growth to 20 inches or less because of low pH in the underlying material. Surface textures are medium or moderately fine. Available water capacity is low or very low because of large amounts of coarse fragments. Slopes range from 0 to 25 percent.	1.3	--	Kentucky bluegrass
	2.5	--	Tall fescue
	2.3	--	Orchardgrass
	1.8	--	Switchgrass
	1.8	--	Big Bluegrass
2.4	--	Indiangrass	

^{1/} See page 16.

^{2/} Adaptation: Northern Ohio - Good; Central Ohio - Good; Southern Ohio - Poor.

^{3/} Assumes tall grasses such as orchardgrass, Tall fescue or Bromegrass, but no Kentucky bluegrass.

^{4/} Adaptation: Northern Ohio - Good; Central Ohio - Fair; Southern Ohio - Poor.

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PASTURE AND HAYLAND SUITABILITY GROUPS	YIELDS Animal Unit Months 1/ (AUMs)	Hay Dry Matter Equiv. (Tons)	SPECIES Adapted to Entire State Unless Indicated Otherwise
<u>Group F - Soils that restrict root growth of climatically adapted plants to less than 40 inches but greater than 20 inches.</u>			
<u>Group F-1</u>			
Moderately deep, well drained and moderately well drained soils.	3.8	2.3	Kentucky bluegrass
Surface textures range from coarse to moderately fine. Available water capacity is low or moderate.	6.3	3.8	Tall fescue
Slopes range from 0 to 25 percent.	6.0	3.6	Orchardgrass
	6.0	3.6	Bromegrass ^{2/}
	4.6	2.8	Timothy
	6.3	3.8	Alfalfa + grass ^{3/}
	4.6	2.8	Birdsfoot trefoil + grass ^{3/4/}
	4.5	2.7	Switchgrass
	4.5	2.7	Big Bluestem
	6.0	3.6	Indiangrass
<u>Group F-2</u>			
Moderately deep, well drained and moderately well drained soils.	1.7	—	Kentucky bluegrass
Surface textures range from coarse to moderately fine. Available water capacity is low or moderate.	3.0	—	Tall fescue
Slopes range from 25 to 40 percent.	2.7	—	Orchardgrass
<u>Group F-3</u>			
Well drained or moderately well drained soils that are moderately deep to a fragipan. Surface textures range from moderately coarse to moderately fine.	3.7	2.2	Kentucky bluegrass
Available water capacity is moderate or low in the root zone.	5.9	3.6	Tall fescue
Slopes range from 0 to 25 percent.	5.7	3.4	Orchardgrass
	5.7	3.4	Bromegrass ^{2/}
	4.4	2.6	Timothy
	5.9	3.6	Alfalfa + grass ^{3/}
	4.4	2.6	Birdsfoot trefoil + grass ^{3/4/}
	4.3	2.6	Switchgrass
	4.3	2.6	Big Bluestem
	5.7	3.4	Indiangrass
<u>Group F-4</u>			
Well drained or moderately well drained soils that are moderately deep to a fragipan. Surface textures range from moderately coarse to moderately fine.	1.5	—	Kentucky bluegrass
Available water capacity is moderate or low in the root zone.	2.8	—	Tall fescue
Slopes range from 25 to 40 percent.	2.5	—	Orchardgrass

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	Animal Unit Months ^{1/} (AUMs)	Hay Dry Matter Equiv. (Tons)	
Group F-5			
Soils with high bulk density, high clay content, or other physical characteristics in the subsoil that restrict rooting depth. Soils are moderately well drained or well drained. Available water capacity is moderate or low in the root zone. Slopes range from 0 to 25 percent.	3.5	2.1	Kentucky bluegrass
	6.0	3.6	Tall fescue
	5.7	3.4	Orchardgrass
	4.3	2.6	Timothy
	5.7	3.4	Bromegrass ^{2/}
	4.3	2.6	Birdsfoot trefoil + grass ^{3/4}
	6.0	3.6	Red clover + grass ^{3/}
	4.3	2.6	Switchgrass
4.3	2.6	Big Bluestem	
5.7	3.4	Indiangrass	
Group F-6			
Soils with high bulk density, high clay content, or other physical characteristics in the subsoil that restrict rooting depth. Soils are moderately well drained or well drained. Surface texture ranges from medium to fine. Available water capacity is moderate or low in the root zone. Slopes range from 25 to 40 percent.	1.5	—	Kentucky bluegrass
	2.8	—	Tall fescue
	2.6	—	Orchardgrass
Group F-7			
Soils with high bulk density, high clay content, or other physical characteristics in the subsoil that restrict rooting depth. Natural drainage ranges from very poorly drained to somewhat poorly drained. Surface texture ranges from moderately coarse to fine. Available water capacity is moderate or low in the root zone. Slopes range from 0 to 6 percent.	3.6	2.2	Kentucky bluegrass
	5.6	3.4	Tall fescue
	5.4	3.2	Orchardgrass
	5.4	3.2	Bromegrass ^{2/}
	4.2	2.5	Timothy
	4.8	2.9	Red clover + grass ^{3/}
	4.2	2.5	Birdsfoot trefoil + grass ^{3/4}
	4.0	2.4	Switchgrass

^{1/} See page 16.

^{2/} Adaptation: Northern Ohio - Good; Central Ohio - Good; Southern Ohio - Poor.

^{3/} Assumes tall grasses such as orchardgrass, Tall fescue or Bromegrass, but no Kentucky bluegrass.

^{4/} Adaptation: Northern Ohio - Good; Central Ohio - Fair; Southern Ohio - Poor.

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	Animal Unit Months 1/ (AUMs)	Hay Dry Matter Equiv. (Tons)	

Group G - Soils with unfavorable chemical properties for many climatically adapted plants.

Group G-1

Well drained soils that are shallow or moderately deep to toxic spoil from surface mine operations. Surface textures range from coarse to moderately fine. Available water capacity is low or very low in the root zone. Slopes range from 0 to 25 percent slopes.	2.7	1.6	Kentucky bluegrass
	5.0	3.0	Tall fescue
	4.7	2.8	Orchardgrass
	3.3	2.0	Birdsfoot trefoil + grass ^{3/4/}
	3.6	2.1	Switchgrass
	3.6	2.1	Big Bluestem
	4.8	2.8	Indiangrass

Group G-2

Well drained soils that are shallow or moderately deep to toxic spoil from surface mine operations. Surface textures range from coarse to moderately fine. Available water capacity is low or very low in the root zone. Slopes range from 25 to 40 percent slopes.	1.3	—	Kentucky bluegrass
	2.5	—	Tall fescue
	2.3	—	Orchardgrass

Group H

Not adapted

Group H-1

Soils that are toxic or are on slopes greater than 40 percent. Also includes minedland with soil characteristics that prohibit its use for pasture.			Not adapted
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1/ See page 16.

2/ Adaptation: Northern Ohio - Good; Central Ohio - Good; Southern Ohio - Poor.

3/ Assumes tall grasses such as orchardgrass, Tall fescue or Bronegrass, but not Kentucky bluegrass.

4/ Adaptation: Northern Ohio - Good; Central Ohio - Fair; Southern Ohio - Poor.

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OHIO PASTURE CALENDAR GUIDE

Grazing days for the year and by months based upon the anticipated hay yields and for the various crops indicated for one cow equivalent. (One Animal Unit).
An Animal Unit is the equivalent of one cow in feed consumption; one dairy or beef cow, two heifers or two beef steers, five ewes, one horse, and six sows.

An Animal Unit of pasture in any month is approximately the amount of pasture which a mature dairy or beef animal will eat in a month of grazing. Animal unit days estimated by dividing Hay Equivalent by 40 (except for legumes and Deferred & Winter grazing).

Species	Annual Hay Yield Equiv. Lbs.	Total Grazing	Percent of Grazing Available by Month													
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March		
Bluegrass	3000-4000	100%	--	30%	28%	12%	5%	13%	12%	12%	--	--	--	--	--	--
Untreated Bluegrass	5000-6000	100%	6%	29%	29%	9%	5%	10%	8%	4%	--	--	--	--	--	--
L-N-P-K Bluegrass (Deferred Grazing)	5000-6000	100%	--	--	--	52%	32%	11%	5%	--	--	--	--	--	--	--
Tall Fescue	8000-10,000	100%	11%	25%	21%	7%	5%	15%	9%	5%	2%	--	--	--	--	--
L-N-P-K Tall Fescue (Winter Pasture)	8000-10,000	100%	12%	--	Bale	--	--	--	--	--	22%	22%	22%	22%	22%	22%
Orchardgrass	8000-9000	100%	8%	24%	24%	14%	12%	8%	8%	2%	--	--	--	--	--	--
L-N-P-K Bromegrass	7000-8000	100%	9%	31%	29%	4%	3%	10%	10%	4%	--	--	--	--	--	--
L-N-P-K Timothy	6000-7000	100%	10%	33%	30%	4%	3%	11%	6%	3%	--	--	--	--	--	--
L-N-P-K Alfalfa Grass	8000-10,000	100%	3%	28%	25%	19%	18%	7%	--	--	--	--	--	--	--	--
L-P-K Birdsfoot Trefoil Grass	6000-7000	100%	4%	22%	29%	24%	15%	6%	--	--	--	--	--	--	--	--
L-P-K Red Clover Grass	6000-7000	100%	2%	29%	32%	13%	16%	8%	--	--	--	--	--	--	--	--
L-P-K Sudangrass	7000-8000	100%	--	--	10%	35%	32%	18%	5%	--	--	--	--	--	--	--
Winter Barley	2000-3000	100%	24%	37%	--	--	--	--	8%	24%	7%	--	--	--	--	--
or Rye	2000-2500	100%	34%	44%	--	--	--	--	22%	--	--	--	--	--	--	--
Wheat	3000-4000	100%	--	--	--	--	--	--	50%	50%	--	--	--	--	--	--
Corn Stalks	5000-8000	100%	--	--	20%	40%	25%	15%	--	--	--	--	--	--	--	--
Switchgrass	4000-6000	100%	--	--	20%	42%	23%	15%	--	--	--	--	--	--	--	--
Big Bluestem	5000-8000	100%	--	--	21%	38%	35%	6%	--	--	--	--	--	--	--	--
Indianagrass																

Developed in cooperation with the Ohio Cooperative Extension Service.

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