United States Department of Agriculture

NRCS Prescribed Grazing Std. 528 -Stocking Rate & Carrying Capacity

Illinois TSP/Planner On-line Training
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NRCS Conservation Practice Standard Prescribed Grazing 528

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- Select FOTG (middle screen, right)
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- Section IV – Practice Standards and Supporting Documents
- Conservation Practice Standards and Support Documents
- Prescribed Grazing (528)

Refer to the National Range and Pasture handbook for Additional Guidance.

https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/landuse/rangepasture/?cid=stelprdb1043084

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Documents:

- 528 IL CPS Prescribed Grazing 2013
- 528 IL SOW Prescribed Grazing 2012
- 528 IL IR Prescribed Grazing-Fillable Jobsheet 2012
- 528 IL GD Prescribed Grazing CPS Management Tables 2012
- 528 IL OTH Graze4 Central IL 2018
- 528 IL OTH Graze4 Central IL 2018
- 528 IL OTH Graze4 Central IL 2018
- 528 IL OTH Prescribed Grazing-Grazing Management Record 2012
- 528 IL OTH Prescribed Grazing-Pasture Hayland Livestock Long Inventory Worksheet 2012
- 528 IL OTH Prescribed Grazing-Pasture Hayland Livestock Short Inventory Worksheet 2012

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- Refer to the National Range and Pasture handbook for Additional Guidance.

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528 CPS Grazing & Rest Period

A prescribed grazing plan includes minimum grazing heights from Table 1, min/max rest and grazing periods from Table 2, and a balance with forage growth by the month from Table 3 and to sustain the proper forage growth and longevity.
- 528 IL GD Prescribed Grazing CPS Management Tables 2012

This provides the directions to the tables that give the specific guidance on rest periods and min/max forage heights to follow to support the forage to animal balance.

TABLE 1: Minimum Heights of Forage Species for Initiating and Terminating Grazing

SPECIES AND MIXTURES	Minimum/ Optimum Height of Vegetative Growth 1/	Minimum Grazing Height 2/	Minimum Regrowth Before Killing Frost	Approximate Date to Begin Rest for Winter protection, by Plant Suitability Zones 3/		
COOL SEASON (C3s)	INCHES Begin Grazing	INCHES End Grazing	INCHES	I	II	III
Alfalfa	10	3	6	9/1-10/1	9/15-10/15	9/20-10/20
Annual Crabgrass	8	3	6	9/1-10/1	9/1-10/1	9/1-10/1
Annual Lespedeza	8	4	5/	9/1-10/1	9/15-10/15	9/20-10/20
Annual Lespedeza with Orchardgrass or Tall Fescue	8	4	8	9/1-10/1	9/15-10/15	9/20-10/20
Birdsfoot Trefoil	10-12	5-6	5	9/1-10/1	9/15-10/15	9/20-10/20
Brassicas (Turnips, Radishes, Kale, etc… Fall	12-14	4	NA	NA	NA	NA
Chicory	6	2	6	9/1-10/1	9/15-10/15	9/20-10/20
Kentucky Bluegrass, Perennial Ryegrass	4-6	2-3	4	4/	4/	4/
Kentucky Bluegrass, Perennial Ryegrass with a clover legume	4-6	4	5	9/1-10/1	9/15-10/15	9/20-10/20
Ladino White Clover	8	3	6	9/1-10/1	9/15-10/15	9/20-10/20
Orchardgrass, Tall Fescue and other non-jointed grasses	8	3	6	4/	4/	4/
Orchardgrass, Tall Fescue and other non-jointed grasses with a clover legume	6-8	3	8	9/1-10/1	9/15-10/15	9/20-10/20
Orchardgrass, Tall Fescue and other non-jointed grasses with Alfalfa	8-10	3	8	9/1-10/1	9/15-10/15	9/20-10/20
Pearl Millet	18-20	4-6	NA	NA	NA	NA
Red and Alsike Clover	8-10	3	8	9/1-10/1	9/15-10/15	9/20-10/20
Reed Canarygrass 7/	8	4	6	9/1-10/1	9/15-10/15	9/20-10/20
Reed Canarygrass with a legume	8	4	6	9/1-10/1	9/15-10/15	9/20-10/20
Small Grains	8-10	3	NA	NA	NA	NA
Sorghum-Sudangrass	18-24	8-10	NA	NA	NA	NA
Timothy, Smooth Bromegrass and other jointed grasses	8	4	8	9/1-10/1	9/15-10/15	9/20-10/20
Timothy, Smooth Bromegrass and other jointed grasses with a legume	8	4	8	9/1-10/1	9/15-10/15	9/20-10/20
WARM SEASON (C4s)						
Big Bluestem	18	8 6/	10	9/10-10/10	9/15-10/15	9/20-10/20
Eastern Gamagrass	20	10	15	9/10-10/10	9/15-10/15	9/20-10/20
Indiangrass	18	8 6/	10	9/10-10/10	9/15-10/15	9/20-10/20
Switchgrass	18	8 6/	10	9/10-10/10	9/15-10/15	9/20-10/20

TABLE 2: Grazing Management Guidelines.

Pasture Kind	Min-Max Grazing Periods (days) 1/	Min-Max Rest Periods (days) 2/	Minimum Pastures Needed (number) 3/
Single Species - 1 specie planting (essentially a monoculture)			
Introduced:			
cool season	10 - 22	20 - 45	3
warm-season	10 - 22	20 - 45	3
legume	6 - 9	25 - 35	5
Native:			
warm-season	1 -17	20 - 50	4
Simple Mixtures - 2 - 4 similar species and/or legumes			
Introduced:			
cool-season	8 -15 / 6 - 11	25 - 45	4/5 w/legumes
warm-season	8 -15 / 6 - 11	25 - 45	4/5 w/legumes
Native:			
warm-season	8 -12	30 - 50	5
Complex Mixtures - 5 or more dissimilar species			
Introduced:			
cool-season	5 - 9	25 - 45	6
warm-season	5 - 9	25 - 45	6
Native			
warm-season	4 - 7	30 - 50	8

1/ "Min-Max Grazing Periods" are determined by the Min-Max Rest Period necessary for adequate recovery of the pasture following grazing, and also limits second bite opportunity. However, second bites occur if livestock are left in a pasture longer than 5 days.

2/ "Min-Max Rest Periods" provide time for pastures to recover from grazing. The pasture's potential growth rate and current growing conditions regulate the length of the rest period. (rapid growth, rapid rotation - slow growth, slow rotation.

3/ "Minimum Pastures Needed" is a relationship between necessary rest period and appropriate grazing period. Increasing pasture numbers reduces length of grazing period, increases pasture rest time, improves harvest efficiency, and provides higher forage quality. A minimum of three pastures must be included in the plan to meet prescribed grazing standards for grass pastures and a minimum of five pastures for pastures containing grass legume mixtures.

528 CPS Guidance Documents Table 2. Footnotes

1/ "Min-Max Grazing Periods" are determined by the Min-Max Rest Period necessary for adequate recovery of the pasture following grazing, and also limits second bite opportunity. **However, second bites occur if livestock are left in a pasture longer than 5 days.**

This table comes for the national std. however the focus of the Illinois NRCS Prescribed Grazing Std. is on the avoidance of the second bite to the plant! "As stated" if livestock are on the same pasture for more than 5 days they tend to re-graze (take a second bite) from the same plants. This sets the plant farther back in the regrowth stage and can cause the roots to shorten as well because the plant top is overgrazed!

528 CPS Guidance Documents Table 2. Footnotes

2/ "Min-Max Rest Periods" provide time for pastures to recover from grazing. The pasture's potential growth rate and current growing conditions regulate the length of the rest period. (rapid growth, rapid rotation – slow growth, slow rotation.)

With grasses and legumes they can sustain shorter rest periods in the spring, (fast growth periods) however as the temperature heats up they will need longer rest periods (35-45-60 (+)days) in the heat of the summer. Most cool season grasses will slow or shut down growth as the soil temperature reaches and exceeds 80 degrees. CSG's will have reached their reproductive stages by then.

CSG grow best from 60-80 degree F
Legumes grow best 70-90 degrees F
NWSG grow best 85-100 degrees F

528 Std. Page 7 left column, Grazing & Rest Period

During rapid growth, short rest periods are necessary; as growth slows rest periods need to be lengthened. **(See TABLE 2 for minimum and maximum rest periods)**

With grasses and legumes they can sustain shorter rest periods in the spring, (fast growth periods) however as the temperature heats up they will need longer rest periods (35-45-60 (+)days) in the heat of the summer. Most cool season grasses will slow or shut down growth as the soil temperature reaches and exceeds 80 degrees. CSG's will have reached their reproductive stages by then.

CSG grow best from 60-80 degree F
Legumes grow best 70-90 degrees F
NWSG grow best 85-100 degrees F

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3/ "Minimum Pastures Needed" is a relationship between necessary rest period and appropriate grazing period. Increasing pasture numbers reduces length of grazing period, increases pasture rest time, improves harvest efficiency, and provides higher forage quality. **A minimum of three pastures must be included in the plan to meet prescribed grazing standards for grass pastures and a minimum of five pastures for pastures containing grass legume mixtures.**

Basically pure grass stands can tolerate a shorter rest cycle under good growing conditions than legumes. The bottom line is if a grass/legume mixture is planned, then to sustain the forages properly you should have a minimum of 5 pastures and graze no longer than 7 days per pasture! As stated earlier, the 5 day bite cycle should be adhered to and plan 7 pastures in a system would be better for the forages! If this 5 pasture system cannot be reached as a minimum then the SWAPA+H resources many not be protected! If the livestock are allowed to graze 10 days that is about the same as continuous grazing on the plants because of second and third bite potential!

TABLE 3-1. FORAGE PRODUCTION

Pasture/Forage Type*	Total Yield**	Percent of Total Yield Available in Each Month**												
		%Jan	%Feb	%Mar	%Apr	%May	%Jun	%Jul	%Aug	%Sep	%Oct	%Nov	%Dec	Total
Northern IL (NRCS Plant Suitability Zone 1) -- Optimum Management***														
Alfalfa	4.60				5	23	24	18	15	10	5			100
Alfalfa/Orchardgrass	4.20				6	23	24	18	13	11	5			100
Alfalfa/Smooth Bromegrass	4.00				6	23	24	18	13	11	5			100
Big Bluestem	2.60					3	14	37	32	14				100
Big Bluestem/Indiangrass	2.60					3	12	37	36	12				100
Birdsfoot Trefoil/cool season grass	2.60				5	14	32	23	12	8	6			100
Bluegrass, Kentucky/Dutch Wh. Clover	2.80				8	28	29	9	7	12	7			100
Bluegrass, KY/Tall Fescue/Ladino Cl.	3.25				9	20	20	17	10	11	11	2		100
Bluegrass, KY/Orchardgrass/Ladino Cl.	3.25				7	23	24	16	10	14	6			100
Bluegrass, KY/Orchardgrass/Red Cl.	3.50				6	19	24	20	12	14	5			100
Bluegrass, KY/Tall Fescue/Red Cl.	3.50				5	20	20	19	11	13	10	2		100
Bromegrass, Smooth	3.50				8	31	27	11	6	11	6			100
Bromegrass, Smooth/Ladino Clover	3.70				8	25	25	15	10	10	7			100
Bromegrass, Smooth/Red Clover	3.90				8	22	25	15	15	10	5			100
Brush, (for Goat pasture)	1.25				4	25	28	28	10	5				100
Brush, Grass, and Forbes for Goats	2.50				5	23	23	22	15	9	3			100
Chicory	2.30				5	11	32	24	13	10	5			100
Corn (Green Grazed)	4.50					10	40	40	10					100
Corn Stalk Residue	1.50										100			100
Eastern Gama Grass	4.25					8	30	35	22	5				100
Fescue, Tall (not stockpiled)	3.70				9	26	25	13	7	12	6	2		100
Fescue, Tall (stockpiled)	4.20				9	20	20	13	8	15	13	2		100
Fescue, Tall/Ladino Clover	3.80				9	20	23	15	10	11	10	2		100
Fescue, Tall/Red Clover	4.10				5	20	20	19	11	13	10	2		100
Fescue, Tall/Red Clover (stock piled)	4.40				5	20	20	10	10	15	15	5		100
Indiangrass	2.60					2	12	34	38	14				100
Millet, Pearl	3.50					1	15	31	31	19	3			100
Oats (August seeding)	1.20								12	40	40	8		100
Oats (March-April seeding)	2.20				20	35	35	10						100
Orchardgrass	3.50				7	27	20	14	12	13	7			100
Orchardgrass/Ladino Clover	3.60				9	23	23	14	11	15	5			100
Orchardgrass/Red Clover	3.70				5	20	23	19	13	15	5			100
Orchardgrass/Red Clover (stockpiled)	4.20				5	20	20	10	10	15	15	5		100
Orchardgrass/Tall Fescue/Ladino Clover	4.00				9	22	22	14	7	11	13	2		100
Orchardgrass/Tall Fescue/Red Clover	4.20				5	20	21	18	12	13	8	3		100
Red Clover	2.70				6	25	33	17	9	6	3	1		100
Reed Canarygrass	3.40				5	19	27	20	12	11	5	1		100
Rye, Cereal (Aug. seeded)	1.60			3	22	28	10		5	15	10	7		100
Ryegrass, Italian/Annual (Aug. seeded)	1.50				15	30	20	5		2	10	13	5	100
Ryegrass, Perennial/Ladino Clover	3.50				8	30	25	12	5	10	7	3		100
Ryegrass, Perennial/Red Clover	3.70				5	22	25	18	8	10	10	2		100
Sorghum-sudangrass	3.60					1	13	32	34	20				100
Switchgrass	3.00					11	24	32	23	10				100
Timothy	2.70				8	23	34	10	6	14	5			100
Triticale, Fall seeded	2.40			2	23	30	10		5	15	10	5		100
Turnips (Aug. seeded)	2.50								12	38	35	15		100
Turnips/C. Rye (Aug. seeded)	4.50			3	22	25			5	15	15	10	5	100
Turnips/C. Rye/Oats (Aug. seeded)	2.90			5	25	20			5	15	15	10	5	100
Turnips/Oats (Aug. seeded)	3.00								12	38	35	15		100

*The listing of forage species is not meant to be all inclusive, rather the listing represents species commonly grown in this region of Illinois.

**Yields and monthly production figures were obtained from a wide variety of sources and should be considered a guide, and not absolute values. Differences (disease resistance, winter hardiness, environmental factors, etc.) between varieties will exist and these differences, are not reflected in the yield and monthly production.

***Optimum Management: A high plant density exists; pH., P, & K are at optimal levels; nitrogen is applied to grass dominant paddocks; undesirable weeds are controlled; and controlled grazing (rotational or MIG) is practiced.

TABLE 3-2. FORAGE PRODUCTION

Pasture/Forage Type*	Total Yield**	Percent of Total Yield Available in Each Month**												
		%Jan	%Feb	%Mar	%Apr	%May	%Jun	%Jul	%Aug	%Sep	%Oct	%Nov	%Dec	Total
Northern IL (NRCS Plant Suitability Zone 1) -- Average Management***														
Alfalfa	3.00				5	23	24	18	15	10	5			100
Alfalfa/Orchardgrass	2.75				6	23	24	18	13	11	5			100
Alfalfa/Smooth Bromegrass	2.60				6	23	24	18	13	11	5			100
Big Bluestem	1.90					3	14	37	32	14				100
Big Bluestem/Indiangrass	1.90					3	12	37	36	12				100
Birdsfoot Trefoil/cool season grass	1.70				5	14	32	23	12	8	6			100
Bluegrass, Kentucky/Dutch Wh. Clover	1.80				8	28	29	9	7	12	7			100
Bluegrass, KY/Tall Fescue/Ladino Cl.	2.10				9	20	20	17	10	11	11	2		100
Bluegrass, KY/Orchardgrass/Ladino Cl.	2.10				7	23	24	16	10	14	6			100
Bluegrass, KY/Orchardgrass/Red Cl.	2.30				6	19	24	20	12	14	5			100
Bluegrass, KY/Tall Fescue/Red Cl.	2.30				5	20	20	19	11	13	10	2		100
Bromegrass, Smooth	2.30				8	31	27	11	6	11	6			100
Bromegrass, Smooth/Ladino Clover	2.40				8	25	25	15	10	10	7			100
Bromegrass, Smooth/Red Clover	2.60				8	22	25	15	15	10	5			100
Brush, (for Goat pasture)	2.00				4	25	28	28	10	5				100
Brush, Grass, and Forbes for Goats	2.40				5	23	23	22	15	9	3			100
Chicory	1.50				5	11	32	24	13	10	5			100
Corn (Green Grazed)	3.00					15	35	40	10					100
Corn Stalk Residue	1.50										100			100
Eastern Gama Grass	2.80					8	30	35	22	5				100
Fescue, Tall (not stockpiled)	2.40				9	26	25	13	7	12	6	2		100
Fescue, Tall (stockpiled)	2.70				9	20	20	13	8	15	13	2		100
Fescue, Tall/Ladino Clover	2.30				9	20	23	15	10	11	10	2		100
Fescue, Tall/Red Clover	2.70				5	20	20	19	11	13	10	2		100
Fescue, Tall/Red Clover (stock piled)	2.90				5	20	20	10	7	15	15	8		100
Indiangrass	1.90					2	12	34	38	14				100
Millet, Pearl	2.30					1	15	31	31	19	3			100
Oats (August seeding)	0.80								12	40	40	8		100
Oats (March-April seeding)	1.40				20	35	35	10						100
Orchardgrass/Tall Fescue/Ladino Clover	2.60				9	22	22	14	7	11	13	2		100
Orchardgrass/Tall Fescue/Red Clover	2.70				5	20	21	18	12	13	8	3		100
Orchardgrass	2.30				7	27	20	14	12	13	7			100
Orchardgrass/Ladino Clover	2.30				9	23	23	14	11	15	5			100
Orchardgrass/Red Clover	2.40				5	20	23	19	12	16	5			100
Orchardgrass/Red Clover (stockpiled)	2.70				5	20	20	10	10	15	15	5		100
Red Clover	1.80				6	25	33	17	9	6	3	1		100
Reed Canarygrass	2.20				5	19	27	20	12	11	5	1		100
Rye, Cereal (Aug. seeded)	1.00			3	22	28	10		5	15	10	7		100
Ryegrass, Perennial/Ladino Clover	2.30				8	30	25	12	5	10	7	3		100
Ryegrass, Perennial/Red Clover	2.40				5	22	25	18	8	10	10	2		100
Ryegrass, Italian/Annual (Aug. seeded)	1.00			15	30	20	5			2	10	13	5	100
Sorghum-sudangrass	2.30					1	13	32	34	20				100
Switchgrass	2.00					11	24	32	23	10				100
Timothy	1.70				8	23	34	10	6	14	5			100
Triticale, Fall seeded	1.60			2	23	30	10		5	15	10	5		100
Turnips (Aug. seeded)	1.60								12	38	35	15		100
Turnips/C. Rye (Aug. seeded)	3.00			3	22	25			5	15	15	10	5	100
Turnips/C. Rye/Oats (Aug. seeded)	1.90			5	25	20			5	15	15	10	5	100
Turnips/Oats (Aug. seeded)	2.00								12	38	35	15		100

*The listing of forage species is not meant to be all inclusive, rather the listing represents species commonly grown in this region of Illinois.

**Yields and monthly production figures were obtained from a wide variety of sources and should be considered a guide, and not absolute values. Differences (disease resistance, winter hardiness, environmental factors, etc.) between varieties will exist and these differences, are not reflected in the yield and monthly production.

***Average Management: Bare or open soil areas exist in paddocks; pH., P, & K are below optimal levels; nitrogen is not applied to grass dominant paddocks; undesirable weeds are not controlled; and paddocks receive limited rest periods.

TABLE 3-3. FORAGE PRODUCTION

Pasture/Forage Type*	Total Yield**	Percent of Total Yield Available in Each Month**												
		%Jan	%Feb	%Mar	%Apr	%May	%Jun	%Jul	%Aug	%Sep	%Oct	%Nov	%Dec	Total
Central IL (NRCS Plant Suitability Zone 2) -- Optimum Management***														
Alfalfa	4.32			2	8	19	21	15	10	16	7	2		100
Alfalfa/Orchardgrass	4.00			3	9	21	20	13	8	10	12	4		100
Alfalfa/Smooth Bromegrass	3.80			4	10	25	20	10	7	9	12	3		100
Big Bluestem	3.00					10	33	32	20	5				100
Big Bluestem/Indiangrass	3.00					8	20	27	30	15				100
Birdsfoot Trefoil/cool season grass	2.60			2	9	22	23	16	10	10	7	1		100
Bluegrass, Kentucky/Dutch Wh. Clover	2.30			2	14	28	21	6	4	7	12	6		100
Bluegrass, KY/Tall Fescue/Ladino Cl.	3.60			2	11	20	21	12	8	9	13	4		100
Bluegrass, KY/Orchardgrass/Ladino Cl.	3.40			1	9	21	24	12	9	10	10	4		100
Bluegrass, KY/Orchardgrass/Red Cl.	3.65			1	5	22	24	12	9	13	10	4		100
Bluegrass, KY/Tall Fescue/Red Cl.	3.80			3	9	20	19	14	9	10	12	4		100
Bromegrass, Smooth	3.00			2	15	23	20	10	6	8	10	6		100
Bromegrass, Smooth/Ladino Clover	3.30			3	10	23	23	9	7	8	12	5		100
Bromegrass, Smooth/Red Clover	3.80			2	8	22	23	10	9	10	12	4		100
Brush, (for Goat pasture)	1.25				5	28	29	25	7	6				100
Brush, Grass, and Forbes for Goats	2.50			2	12	21	22	12	9	10	8	4		100
Chicory	2.50				7	19	20	20	13	15	6			100
Corn (Green Grazed)	4.50					15	25	25	25	10				100
Corn Stalk Residue	1.50										100			100
Crabgrass, Annual	1.50					5	23	30	22	15	5			100
Eastern Gama Grass	4.10					12	21	31	25	8	3			100
Fescue, Tall/Lespedeza	3.90			2	10	17	16	13	11	11	14	5	1	100
Fescue, Tall (not stockpiled)	3.85			5	16	20	20	8	5	10	13	3		100
Fescue, Tall (stockpiled)	4.40			5	15	17	16	8	5	12	13	8	1	100
Fescue, Tall/Ladino Clover	3.80			2	15	18	21	10	8	9	12	4	1	100
Fescue, Tall/Red Clover	4.00			2	12	20	19	12	8	10	12	4	1	100
Fescue, Tall/Red Clover (stockpiled)	4.40			2	10	17	20	15	6	12	14	3	1	100
Indiangrass	3.00					7	15	30	32	12	4			100
Millet, Pearl	3.50					9	25	30	25	10	1			100
Oats (August seeding)	1.50								10	35	35	20		100
Oats (March/April seeding)	2.10			8	25	37	29	1						100
Orchardgrass	3.40			5	15	21	20	9	7	10	10	3		100
Orchardgrass/Ladino Clover	3.60			5	15	23	22	7	7	9	10	2		100
Orchardgrass/Red Clover	3.70			3	12	20	19	12	8	10	12	4		100
Orchardgrass/Red Clover (stockpiled)	4.20			2	10	17	17	15	6	15	15	3		100
Orchardgrass/Tall Fescue/Ladino Clover	3.90			7	18	21	20	7	7	8	9	3		100
Orchardgrass/Tall Fescue/Red Clover	4.10			5	10	20	21	14	9	10	8	3		100
Red Clover	2.90			4	9	23	24	16	9	8	6	1		100
Reed Canarygrass	3.60			4	14	21	21	12	7	12	9			100
Rye, Cereal (Aug. seeded)	2.20		5	14	28	21	2			2	10	12	6	100
Ryegrass, Italian/Annual (Aug. seeded)	2.00		1	15	30	20	5			8	14	6	1	100
Ryegrass, Perennial/Ladino Clover	3.50			7	21	20	15	5	5	9	12	6		100
Ryegrass, Perennial/Red Clover	3.80			5	13	25	18	9	4	10	10	6		100
Sorghum-sudangrass	4.10					1	12	31	31	23	2			100
Switchgrass	3.50					15	34	28	18	5				100
Timothy	2.70			2	12	29	30	6	5	11	5	0		100
Triticale, Fall seeded	2.60			3	32	30	10			5	15	5		100
Turnips (Aug. seeded)	2.80								5	35	35	23	2	100
Turnips/C. Rye (Aug. seeded)	4.40		3	30	20	10			2	10	15	8	2	100
Turnips/C. Rye/Oats (Aug. seeded)	3.60		2	15	28	21			2	10	15	5	2	100
Turnips/Oats (Aug. seeded)	3.25								5	35	35	23	2	100

*The listing of forage species is not meant to be all inclusive, rather the listing represents species commonly grown in this region of Illinois.

**Yields and monthly production figures were obtained from a wide variety of sources and should be considered a guide, and not absolute values. Differences (disease resistance, winter hardiness, environmental factors, etc.) between varieties will exist and these differences, are not reflected in the yield and monthly production.

***Optimum Management: A high plant density exists; pH., P, & K are at optimal levels; nitrogen is applied to grass dominant paddocks; undesirable weeds are controlled; and controlled grazing (rotational or MIG) is practiced.

TABLE 3-4. FORAGE PRODUCTION

Pasture/Forage Type*	Total Yield**	Percent of Total Yield Available in Each Month**											
		%Jan	%Feb	%Mar	%Apr	%May	%Jun	%Jul	%Aug	%Sep	%Oct	%Nov	%Dec	Total
Central IL (NRCS Plant Suitability Zone 2) -- Average Management***														
Alfalfa	2.80			2	8	19	21	15	10	16	7	2		100
Alfalfa/Orchardgrass	2.60			3	9	21	20	13	8	10	12	4		100
Alfalfa/Smooth Bromegrass	2.40			4	10	25	20	10	7	9	12	3		100
Big Bluestem	2.10					10	33	32	20	5				100
Big Bluestem/Indiangrass	2.10					8	20	27	30	15				100
Birdsfoot Trefoil/cool season grass	1.80			2	9	22	23	16	10	10	7	1		100
Bluegrass, Kentucky/Dutch Wh. Clover	1.60			2	14	28	21	6	4	7	12	6		100
Bluegrass, KY/Tall Fescue/Ladino Cl.	2.25			2	11	20	21	12	8	9	13	4		100
Bluegrass, KY/Orchardgrass/Ladino Cl.	2.20			1	9	21	24	12	9	10	10	4		100
Bluegrass, KY/Orchardgrass/Red Cl.	2.40			1	5	22	24	12	9	13	10	4		100
Bluegrass, KY/Tall Fescue/Red Cl.	2.50			2	9	20	19	14	9	10	13	4		100
Bromegrass, Smooth	1.80			2	15	23	20	10	6	8	10	6		100
Bromegrass, Smooth/Ladino Clover	2.00			3	10	23	23	9	7	8	12	5		100
Bromegrass, Smooth/Red Clover	2.40			2	8	22	23	10	9	10	12	4		100
Brush, (for Goat pasture)	1.00				5	28	29	25	7	5	1			100
Brush, Grass, and Forbes for Goats	1.80			2	12	21	22	12	9	10	8	4		100
Chicory	1.80				7	19	20	20	13	15	6			100
Corn (Green Grazed)	3.50					10	30	30	20	10				100
Corn Stalk Residue	1.50										100			100
Crabgrass, Annual	1.50					5	23	30	22	15	5			100
Eastern Gama Grass	2.70					12	21	31	25	8	3			100
Fescue, Tall (not stockpiled)	2.50			5	16	20	20	8	5	10	13	3		100
Fescue, Tall (stockpiled)	2.80			5	15	17	16	8	5	12	13	8	1	100
Fescue, Tall/Ladino Clover	2.40			2	15	18	21	10	8	9	12	4	1	100
Fescue, Tall/Lespedeza	2.80			2	10	17	16	13	11	11	14	5	1	100
Fescue, Tall/Red Clover	2.30			2	12	20	19	12	8	10	12	4	1	100
Fescue, Tall/Red Clover (stockpiled)	2.60			2	10	17	20	12	6	10	14	8	1	100
Indiangrass	2.10					7	15	30	32	12	4			100
Millet, Pearl	2.30					9	25	30	25	10	1			100
Oats (August seeding)	1.00								10	35	35	15	5	100
Oats (March/April seeding)	1.30			8	31	31	29	1						100
Orchardgrass	2.20			5	15	21	20	12	7	10	10			100
Orchardgrass/Ladino Clover	2.30			5	15	23	22	7	7	9	10	2		100
Orchardgrass/Red Clover	2.40			3	12	20	19	12	8	10	12	4		100
Orchardgrass/Red Clover (stockpiled)	2.70			2	10	17	17	15	6	15	15	3		100
Orchardgrass/Tall Fescue/Ladino Clover	2.60			7	18	21	20	7	7	8	9	3		100
Orchardgrass/Tall Fescue/Red Clover	2.70			5	10	20	21	14	9	10	8	3		100
Red Clover	1.90			4	9	23	24	16	9	8	6	1		100
Reed Canarygrass	2.40			4	14	21	21	12	7	12	9			100
Rye, Cereal (Aug. seeded)	1.30		2	14	28	24	2			2	11	12	5	100
Ryegrass, Italian/Annual (Aug. seeded)	1.30		1	15	30	20	5			8	14	6	1	100
Ryegrass, Perennial/Ladino Clover	2.30			7	21	20	15	5	5	9	12	6		100
Ryegrass, Perennial/Red Clover	2.40			5	13	25	18	9	4	10	10	6		100
Sorghum-sudangrass	2.50					1	12	31	31	23	2			100
Switchgrass	2.30					15	34	28	18	5				100
Timothy	1.90			2	12	29	30	6	5	11	5			100
Triticale, Fall seeded	1.60			3	32	30	10			5	15	5		100
Turnips (Aug. seeded)	1.80								5	33	35	25	2	100
Turnips/C. Rye (Aug. seeded)	3.00		3	30	20	10			2	10	15	8	2	100
Turnips/C. Rye/Oats (Aug. seeded)	2.40		2	15	28	21			2	10	15	5	2	100
Turnips/Oats (Aug. seeded)	2.20								5	35	35	23	2	100

*The listing of forage species is not meant to be all inclusive, rather the listing represents species commonly grown in this region of Illinois.

**Yields and monthly production figures were obtained from a wide variety of sources and should be considered a guide, and not absolute values. Differences (disease resistance, winter hardiness, environmental factors, etc.) between varieties will exist and these differences, are not reflected in the yield and monthly production.

***Average Management: Bare or open soil areas exist in paddocks; pH., P, & K are below optimal levels; nitrogen is not applied to grass dominant paddocks; undesirable weeds are not controlled; and paddocks receive limited rest periods.

TABLE 3-5. FORAGE PRODUCTION

Pasture/Forage Type*	Total Yield**	Percent of Total Yield Available in Each Month**											
		%Jan	%Feb	%Mar	%Apr	%May	%Jun	%Jul	%Aug	%Sep	%Oct	%Nov	%Dec	Total
Southern IL (NRCS Plant Suitability Zone 3) -- Optimum Management***														
Alfalfa	4.00			2	16	21	15	15	10	12	9			100
Alfalfa/Orchardgrass	3.80			3	14	19	18	13	10	11	10	2		100
Big Bluestem	3.50					14	28	29	24	5				100
Big Bluestem/Indiangrass	3.50					10	20	25	30	15				100
Bluegrass, Kentucky/Dutch Wh. Clover	1.80			2	17	28	15	5	3	7	16	7		100
Bluegrass, KY/Tall Fescue/Ladino Cl.	3.90			7	19	21	20	5	4	6	12	5	1	100
Bluegrass, KY/Orchardgrass/Ladino CL.	3.60			7	19	20	19	5	5	6	12	7		100
Bluegrass, KY/Orchardgrass/Red Cl.	3.80			4	13	20	19	13	8	8	10	5		100
Bluegrass, KY/Tall Fescue/Red Cl.	4.00			5	13	20	18	12	7	7	12	5	1	100
Brush, (for Goat pasture)	1.25				8	25	29	25	7	5	1			100
Brush, Grass, and Forbes for Goats	2.50			2	12	21	22	12	9	10	8	4		100
Chicory	2.70				7	19	20	20	13	15	6			100
Corn (Green Grazed)	4.50					15	25	25	25	10				100
Corn Stalk Residue	1.50										100			100
Crabgrass, Annual	1.80					5	23	35	22	15				100
Eastern Gama Grass	4.00				8	21	26	25	15	5				100
Fescue, Tall (not stockpiled)	4.00			6	15	20	18	7	4	10	13	6	1	100
Fescue, Tall (stockpiled)	4.50			3	12	15	18	6	5	13	15	10	3	100
Fescue, Tall/Ladino Clover	3.80			7	17	20	19	6	5	7	13	5	1	100
Fescue, Tall/Lespedeza	3.60			4	11	17	16	13	10	11	12	5	1	100
Fescue, Tall/Red Clover	4.00			4	12	19	19	12	6	9	12	6	1	100
Fescue, Tall/Red Clover (stockpiled)	4.50			2	10	20	17	12	6	10	14	8	1	100
Fescue, Tall/Red Clover/Lespedeza	4.00			4	10	16	20	13	10	11	10	5	1	100
Indiangrass	3.50					10	15	25	30	15	5			100
Lespedeza, Annual	2.00					17	27	23	14	11	8			100
Millet, Pearl	3.50					9	25	30	25	10	1			100
Oats (August seeded)	1.50								10	35	35	20		100
Oats (March/April seeded)	2.00			5	20	40	35							100
Orchardgrass	3.25			3	16	20	17	9	6	10	13	6		100
Orchardgrass/Ladino Clover	3.50			8	18	20	20	7	5	6	11	5		100
Orchardgrass/Red Clover	3.70			4	13	20	18	14	6	10	10	5		100
Orchardgrass/Red Clover (stockpiled)	4.20			2	10	17	17	15	6	15	15	3		100
Orchardgrass/Tall Fescue/Ladino Clover	3.90			7	19	20	19	5	4	7	13	5	1	100
Orchardgrass/Tall Fescue/Red Clover	4.00			5	13	19	18	13	7	7	11	6	1	100
Red Clover	3.00			4	11	20	20	15	9	8	8	5		100
Reed Canarygrass	3.80			6	18	22	22	17	5	8	2			100
Rye, Cereal (Aug. seeded)	2.50			15	20	30	5			5	10	10	5	100
Ryegrass, Italian/Annual (Aug. seeded)	2.50			4	20	29	24			5	10	7	1	100
Ryegrass, Perennial/Ladino Clover	3.60			8	22	25	17	2	3	7	10	6		100
Ryegrass, Perennial/Red Clover	3.80			7	15	20	17	8	3	13	11	6		100
Sorghum-sudangrass	4.50					5	18	34	25	15	3			100
Switchgrass	4.00					15	39	28	13	5				100
Triticale, Fall seeded	2.50		5	10	20	30				5	15	10	5	100
Turnips (Aug. seeded)	3.00								5	35	35	20	5	100
Turnips/C. Rye (Aug. seeded)	4.30		3	20	30	7				10	15	10	5	100
Turnips/C. Rye/Oats (Aug. seeded)	4.30		5	10	30	20				5	15	10	5	100
Turnips/Oats (Aug. seeded)	3.50								5	35	35	20	5	100

*The listing of forage species is not meant to be all inclusive, rather the listing represents species commonly grown in this region of Illinois.

**Yields and monthly production figures were obtained from a wide variety of sources and should be considered a guide, and not absolute values. Differences (disease resistance, winter hardiness, environmental factors, etc.) between varieties will exist and these differences, are not reflected in the yield and monthly production.

***Optimum Management: A high plant density exists; pH., P, & K are at optimal levels; nitrogen is applied to grass dominant paddocks; undesirable weeds are controlled; and controlled grazing (rotational or MIG) is practiced.

TABLE 3-6. FORAGE PRODUCTION

Pasture/Forage Type*	Total Yield**	Percent of Total Yield Available in Each Month**												
		%Jan	%Feb	%Mar	%Apr	%May	%Jun	%Jul	%Aug	%Sep	%Oct	%Nov	%Dec	Total
Southern IL (NRCS Plant Suitability Zone 3) -- Average Management***														
Alfalfa	2.60			2	16	21	15	15	10	12	9			100
Alfalfa/Orchardgrass	2.50			3	14	19	18	13	10	11	10	2		100
Big Bluestem	2.30					14	28	29	24	5				100
Big Bluestem/Indiangrass	2.30					10	20	25	30	15				100
Bluegrass, Kentucky/Dutch Wh. Clover	1.20			2	17	28	15	5	3	7	16	7		100
Bluegrass, KY/Tall Fescue/Ladino Cl.	2.50			7	19	21	20	4	5	6	13	4	1	100
Bluegrass, KY/Orchardgrass/Ladino Cl.	2.30			7	19	20	19	5	5	6	12	7		100
Bluegrass, KY/Orchardgrass/Red Cl.	2.50			4	13	20	19	13	8	8	10	5		100
Bluegrass, KY/Tall Fescue/Red Cl.	2.60			5	13	20	18	12	5	7	13	6	1	100
Brush, (for Goat pasture)	0.90				8	25	29	25	7	5	1			100
Brush, Grass, and Forbes for Goats	1.60			2	12	21	22	12	9	10	8	4		100
Chicory	2.00				7	19	20	20	13	15	6			100
Corn (Green Grazed)	4.50					15	25	25	25	10				100
Corn Stalk Residue	1.50										100			100
Crabgrass, Annual	1.20					5	23	35	22	15				100
Eastern Gama Grass	2.60				8	21	26	25	15	5				100
Fescue, Tall (not stockpiled)	2.60			6	15	20	18	7	4	10	13	6	1	100
Fescue, Tall (stockpiled)	2.90			3	12	15	18	6	5	13	15	10	3	100
Fescue, Tall/Ladino Clover	2.50			7	17	20	19	6	5	7	13	5	1	100
Fescue, Tall/Lespedeza	2.30			4	11	17	16	13	10	11	12	5	1	100
Fescue, Tall/Red Clover	2.60			4	12	19	19	12	6	9	12	6	1	100
Fescue, Tall/Red Clover (stockpiled)	3.00			2	10	20	19	12	6	10	12	8	1	100
Fescue, Tall/Red Clover/Lespedeza	2.60			4	10	16	20	13	10	11	10	5	1	100
Indiangrass	2.30					10	15	25	30	15	5			100
Lespedeza, Annual	1.30					17	27	23	14	11	8			100
Millet, Pearl	2.30					9	25	30	25	10	1			100
Oats (August seeded)	1.00								10	35	35	20		100
Oats (March/April seeded)	1.30			5	20	40	35							100
Orchardgrass	2.10			3	16	20	17	9	6	10	13	6		100
Orchardgrass/Ladino Clover	2.30			8	18	20	20	7	5	6	11	5		100
Orchardgrass/Red Clover	2.50			4	13	20	18	14	6	10	10	5		100
Orchardgrass/Red Clover (stockpiled)	2.70			2	10	17	17	15	6	15	15	3		100
Orchardgrass/Tall Fescue/Ladino Clover	2.50			7	19	20	19	5	4	7	13	5	1	100
Orchardgrass/Tall Fescue/Red Clover	2.60			5	13	19	18	13	7	7	11	6	1	100
Red Clover	2.00			4	11	20	20	15	9	8	8	5		100
Reed Canarygrass	2.50			6	18	22	22	17	5	8	2			100
Rye, Cereal (Aug. seeded)	1.30			15	20	30	5			5	10	10	5	100
Ryegrass, Italian/Annual (Aug. seeded)	1.60			4	15	29	24	5		5	10	7	1	100
Ryegrass, Perennial/Ladino Clover	2.30			8	22	25	17	2	3	7	10	6		100
Ryegrass, Perennial/Red Clover	2.50			7	15	20	17	8	3	13	11	6		100
Sorghum-sudangrass	2.90					5	18	34	25	15	3			100
Switchgrass	2.60					15	39	28	13	5				100
Triticale, Fall seeded	1.60				15	20	30			5	15	10	5	100
Turnips/C. Rye/Oats (Aug. seeded)	2.80		5	10	30	20				5	15	10	5	100
Turnips (Aug. seeded)	2.00								5	35	35	20	5	100
Turnips/C. Rye (Aug. seeded)	2.80		3	20	30	7				10	15	10	5	100
Turnips/Oats (Aug. seeded)	2.30								5	35	35	20	5	100

*The listing of forage species is not meant to be all inclusive, rather the listing represents species commonly grown in this region of Illinois.

**Yields and monthly production figures were obtained from a wide variety of sources and should be considered a guide, and not absolute values. Differences between varieties will exist and these differences, are not reflected in the yield and monthly production. (disease resistance, winter hardiness, environmental factors, etc.)

***Average Management: Bare or open soil areas exist in paddocks; pH., P, & K are below optimal levels; nitrogen is not applied to grass dominant paddocks; undesirable weeds are not controlled; and paddocks receive limited rest periods.

528 CPS page 6
Stocking Rates

Appropriate estimated stocking rates will be calculated and used as a guide to aid in determining forage supply and demand (Refer to the Illinois Graze4 Worksheets, or other appropriate tools).

Adjust livestock numbers and/or grazing time to match forage demand to forage yield.

Follow the forage height and rest period guidelines in 528 Guidance Document, tables 1 & 2!

528 CPS. page 6
Harvest Efficiency

The length of the grazing cycle determines the harvest efficiency. The shorter the grazing cycles are below 7 days the higher the harvest efficiency.

The whole concept here is to increase stock density (pounds per acres) and avoid the animals from taking a second bite from the same plant without a 5-7 day period! Always allow for a minimum of a 28-30 day rest period for the plants!

Harvest efficiency will be optimized based on the objectives and goals of the client.

The client should decide how often he/she wants to move the animals. Whether using a 7 day grazing cycle or 2 day grazing cycle always maintain a minimum of a 28-30 day rest period!

The following formulas are used to estimate animal numbers or grazing days:

$$\text{A.N.} = \frac{\text{T.F.P./Ac. X Ac. X \%H.E.}}{\text{A.W. X I.R. X Days}} \qquad \text{Days} = \frac{\text{T.F.P./Ac. X Ac. X \%H.E.}}{\text{A.W. X I.R. X A.N.}}$$

A.N. = Animal Number

T.F.P. = Total Forage Production (Total above ground biomass in lbs./acre dry weight)

Ac. = Acres

% H.E. = % Harvest Efficiency

- continuous grazing = 25%-30%
- 7 day grazing period = 35%
- 6 day grazing period = 40%
- 5 day grazing period = 45%
- 4 day grazing period = 50%
- 3 day grazing period = 55%
- 2 day grazing period = 60%
- 1 day grazing period = 65%
- ½ day grazing period = 70–75%

A.W. = Animal weight (pounds)

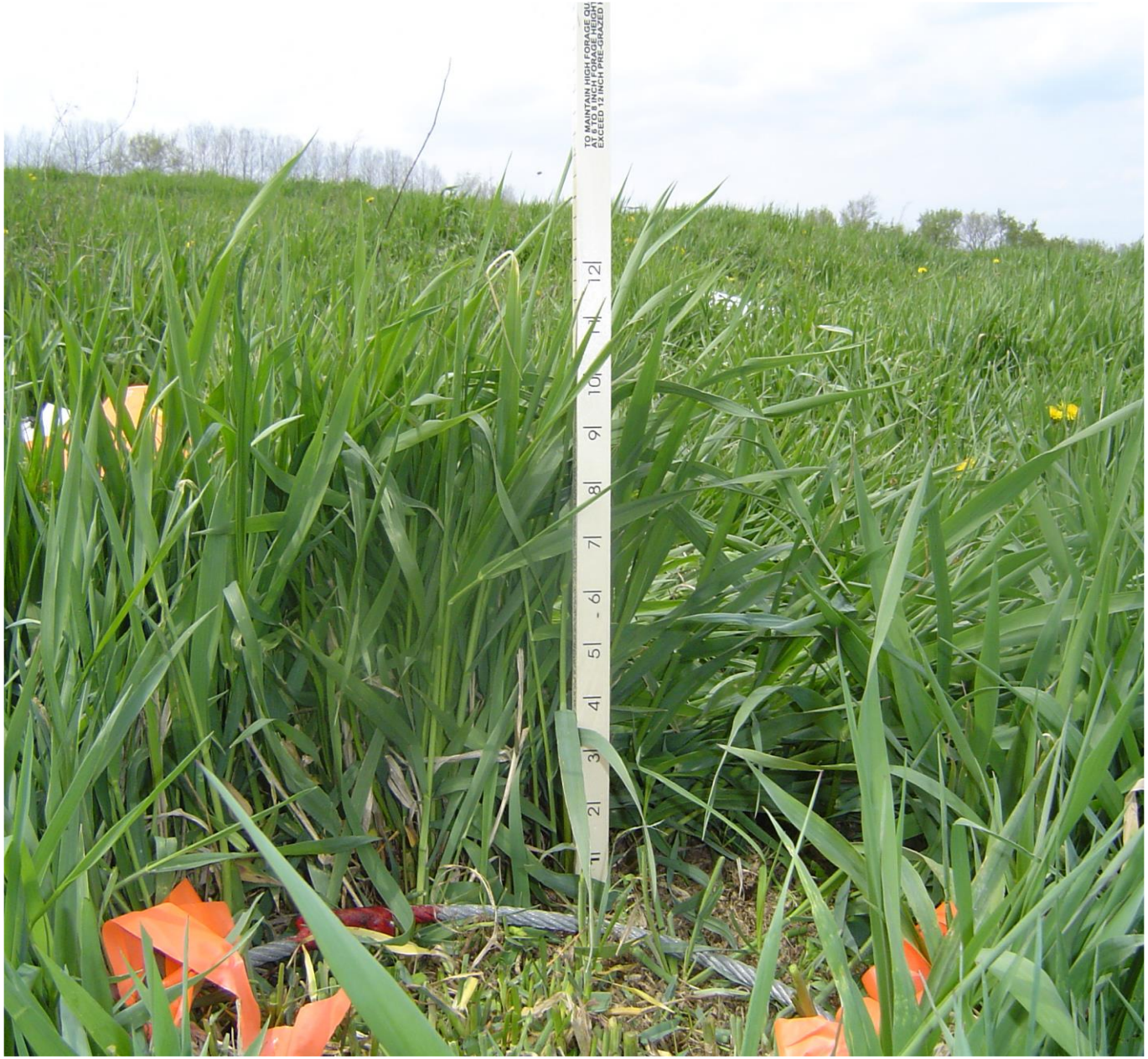
I.R. = Intake Rate in % body weight

Guide:

Dry cow	2.0%
Annual ave. production, Beef	2.6%
Lactating cows	3–4%
Dairy cows	2.5-3.5 + grain
Lactating sheep/goats	3.5-4%
Dry sheep/goats	3%
Doelings/ewes	3%
Horses	2-3% + grain

Days = Days of grazing planned

Total Forage Production (TFP)



528 CPS page 7, Grazing & Rest Period cont

$$GP = \frac{\text{Rest Period needed in days}}{\text{No. of pasture} - \text{No. of herds}}$$

(GP = Grazing Period)

Follow formula to calculate the grazing days in the grazing cycle per pasture/paddock. Always use a minimum of 28-30 days for rest periods!

$$GP = 7 \text{ days} \frac{\text{28-30 days}}{\text{5 pastures-1 herds}}$$

$$\text{\# Pastures/paddocks} = 5 \frac{\text{28-30 days}}{\text{7 days + 1 herd}}$$

Graze4 Excel Worksheet

Save As... | Start New Model

LIVESTOCK-FORAGE BALANCE WORKSHEET

LIVESTOCK NEEDS AND DEMAND SCHEDULE

Start by using the "Save As" option to save a copy of the model to your computer. Enter the general information for the producer you are working with into the yellow cells. Then select the livestock class (or classes) to model by slecting the check box next to the livestock class name. You can select as many livestock classes to model as needed. If you selected a livestock class in error, clicking the check box again will remove that livestock class from the chosen options. Depending on the livestock class chosen, there may be additional management information to enter by selecting the button for "Mgt Info" next to the livestock class name. Enter the managment information within the button (if available) and then enter the required information in the yellow cells to capture the total forage demand. For Cow/Calf, Dairy, Bulls, and Horses livestock classes the "Mgt Info" button will have options to manage the animals on the grazing system all year or an alternative pasture or a dry lot for a portion of the year. The selected option will be reflected directly below the livestock class name.

General Info

Name:
System ID:
Date:
County:
Completed by:
Plan Grazing Days:

Select Livestock Class (select as many as needed)

- ☐ Cow/Calf Pairs Herd 1
- ☐ Cow/Calf Pairs Herd 2
- ☐ Cow/Calf Pairs Herd 3
- ☐ Stockers Herd 1
- ☐ Stockers Herd 2
- ☐ Dairy, Seasonal
- ☐ Dairy, Annual
- ☐ Bulls
- ☐ Horses
- ☐ Goats
- ☐ Sheep

Dairy Options Explanation

Notes: (Use this area to make any notes specific to the model)

Livestock Class	Planned Number	Avg. Weight	Intake Rate (%)	Lbs/Day	Lbs/Year	Forage Demand by Month (Lbs/month)											
						Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Total Forage Demand																	

Total Forage Demand: Grazing System	Total (lbs/year) =																
Total Forage Demand: Alternative Pasture	Total (lbs/year) =																
Total Forage Demand: Dry Lot	Total (lbs/year) =																

Clear All Paddock/Field Info

GRAZING SYSTEM PASTURE FORAGE PRODUCTION

Use this input area to capture the pasture forage production of the grazing system. Add additional paddocks by selecting the "+" icon. You may enter up to 24 separate fields/paddocks. The yellow cells are for user inputs. If hay will be cut on a field/paddock (in addition to being used as part of the grazing system), select the "Y" icon and enter the month hay will be cut. Entering haying information here will automatically add the field/paddock to the "Fields Hayed in Conjunction with Grazing" area below where you will be able to enter details about the hay production. You can override the haying information at any time by selecting the "N" icon to revert the field back to a pasture only field. The Pasture Grazing Efficiency information can be entered manually or you can allow the model to calculate. Select the "What is this?" button below to learn more about this feature.

Add (+) or Remove (-) Rows	Field/ Paddock Number	Kind of Forage *(double click for drop down menu)*	Acres (Usable)	TFP* lbs/ac	Total Production Pounds	Pasture Grazing Eff. (%)	Usable Pounds	Grazing System Pasture Forage Available by Month (Lbs/month)											
								Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
		Will hay be cut on this field? Y N																	
- +																			
		Will hay be cut on this field? Y N																	

Total Usable Acres Grazed

Calculate Pasture Grazing Efficiency

What is this?

Fields Hayed In Conjunction With Grazing

Fields will populate automatically if haying is selected above for any fields. Only enter the Hay Harvest Efficiency (%), the other fields populate automatically based upon the information entered above. The Total Production Pounds is calculated by multiplying the percent of growth that has occured at the time of haying based upon the Forage Growth Curves.

View Forage Growth Curves

Field Number	Kind of Forage	Acres (Usable)	TFP* lbs/ac	Total Production Pounds	Hay Harvest Eff. (%)	Harvested Pounds	Minimum Cutting Ht. (in)
	Totals						

***TFP - Total Forage Production**

What is TFP?

Total Forage Production
Select OPTIMUM yields when:

1. Paddocks are fertilized regularly, OR
2. Paddocks have productive legumes in stand, OR
3. Grazing rotation is 7 days or less, OR
4. Pasture Condition Scoresheet is 31 or Greater

if none of the above, select AVERAGE yields

Clear All Alternative Pasture Info

ALTERNATIVE PASTURE FORAGE PRODUCTION

(only utilize this section if you have selected to manage any of your livestock on an alternative pasture in the Livestock Needs and Demand Schedule above)

There are currently no livestock classes selected to utilize alternative pasture

Use this input area to capture the forage production on alternative pastures(s) that may be used to meet some of the livestock forage needs separate from the main grazing system (as indicated by specific livestock class management in the Livestock Needs and Demands section above). Add additional fields by selecting the "+" icon. You may enter up to 6 separate fields. The yellow cells are for user inputs. An alternative pasture is typically some unmanaged acreage where animals are moved to graze when peak productivity is not required, such as when dairy cows are dry or heifers are not lactating, or when bulls are not with cows for breeding.

Add (+) or Remove (-) Rows	Field Number	Kind of Forage (double click for drop down menu)	Acres (Usable)	TFP lbs/ac	Total Production Pounds	Pasture Grazing Eff. (%)	Usable Pounds	Alternative Pasture Forage Available by Month (Lbs/month)											
								Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
+																			

Clear Hay Info

HAY PRODUCTION AND INVENTORY FOR FIELDS HAYED, SILAGE, HAYLAGE ONLY

Use this input are to capture any additional hay production on fields that are not part of the grazing system. Add additional fields by selecting the "+" icon. You may enter up to 10 separate fields. The yellow cells are for user inputs. The Total Production Pounds is calculated by multiplying the percent of growth that has occured at the time of haying (Haying Month) based upon the Forage Growth Curves. Enter the Haying Month as a number (eg. Jan = 1, Feb = 2, Mar = 3, etc.)

Add (+) or Remove (-) Rows

+

Field Number	Kind of Forage *(double click for drop down menu)*	Hay Acres (Usable)	TFP lbs/ac	Haying Month double click for drop down	Total Production Pounds	Hay Harvest Eff. (%)	Harvested Pounds	Minimum Cutting Ht. (in)
Totals								

SUMMARY OF LIVESTOCK NEEDS AND PASTURE FORAGE PRODUCTION

		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Grazing System: Total Forage Available (Lbs):													
Grazing System: Total Forage Needs (Lbs):													
Total Difference (Lbs):													
Accumulated Balance (Lbs) by month:													
Monthly Balance by %:		**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Footnote: at least 4 months of the grazing season must provide at least 90% (or more) of forage needs from Mid April to Mid October for Southern and Central IL, 3 months of 90% or more for Northern IL.

Alternative Pasture: Total Forage Available (Lbs):													
Alternative Pasture: Total Forage Needs (Lbs):													
Total Difference (Lbs):													
Accumulated Balance (Lbs) by month:													
Grand Total Percentage/Feed Balance		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Dry Lot: Total Forage Available (Lbs):	**0**	0	0	0	0	0	0	0	0	0	0	0	0
Dry Lot: Total Forage Needs (Lbs):													

SUMMARY: FEED AND FORAGE BALANCE

The estimated annual total livestock forage needs are:		Lbs
The estimated total pounds of forage provided through grazing are:		Lbs
(This includes the grazing system and any alternative pasture)		
For a difference of:		Lbs
Hay Inventory		
The estimated harvested pounds of hay is:		Lbs
The estimated storage/feeding loss is*:		%
The available harvested hay is:		Lbs
Estimated carry over hay that is stored on the property:		Lbs
The estimated storage/feeding loss is*:		%
The available carryover hay is:		Lbs
Additional Hay or forage purchased or brought in from off-farm sources is:		Lbs
The estimated storage/feeding loss is*:		%
The available purchased hay is:		Lbs
The balance between ALL sources of feed and the needs of the livestock is (+/-):		**Lbs**

Print Options

Select the buttons for the items from this worksheet to print. Each selection will open a print preview window where you can make adjustments to the print setup before printing.

- Print Livestock Inventory & Demand Summary
- Print Pasture Forage Production Summary
- Print Hay Production Summary
- Print Feed & Forage Balance Summary
- Print Grazing System Graph
- Print Alternative Pasture Graph

View Detailed Summary

Graze4 Excel Worksheet

- Key Points:
- - Cow/Calf Pairs Herd
  - – Accounts for calf on cow for 4 months

  1) Add stocker herd for the 5th month until weaning

  Or

  2) Increase Intake Rate for the Cow/Calf Pairs Herd to 3%

Graze4 Excel Worksheet

- Key Points cont:
- - Stocker Herd
  - Visit with producer for ideal ADG.
  - Should be looking at a minimum of 1.8 lbs ADG.
  - If a grass finishing system, should be looking at 2.5 lbs. ADG

*If low ADG calculated, hurting producer by over estimating number livestock for available forage

Graze4 Excel Worksheet

- Key Points cont:
- If grazing annual forages/cover crops:
  - will have to determine month available to graze based on forage seeded, seeding method, date to be grazed from conversation with producer
  - Will have to account for termination of annual forage/cover crop for planting purposes

Questions?