January 26, 1990

AGRONOMY TECHNICAL NOTE NO. 41
190

SUBJECT: NEW MEXICO GUIDE FOR CARRYING CAPACITY

<u>Purpose</u>. To provide a guide in determining carrying capacity and production of pastureland and hayland.

<u>Effective Date</u>. Effective when received.

<u>Explanation</u>. Attached is a guide for determining carrying capacities for pastureland and estimating production in tons and bales for hayland for various kinds of forage crops and grasses grown in New Mexico.

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Attachment

AGRONOMY TECHNICAL NOTE

NUMBER 41

NEW MEXICO GUIDE

FOR

CARRYING CAPACITY

by

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Soil Conservation Service
New Mexico
January 26, 1990

INSTRUCTIONS FOR USE:

1. Numbers in the guide are estimated carrying capacity in animal units per month (AUM) per acre.

2. To estimate carrying capacity by month, multiply the AUM shown for the level of management by the number of acres in the field.

3. To estimate hay produced, multiply the AUM shown for the level of management by 0.6 or 200 bales times the number of acres in the field.

4. To estimate hay needs, calculate the number of AUM's from the producer's planned or existing stocking rate. Subtract the AUM on the guide for the level of management from the calculated AUM present in the field. Multiply the result by 0.3 tons or 100 bales times the number of acres.

A WORD OF CAUTION:

This is only a guide. Planners should use their best judgement when determining which level of management to use. It is possible to use numbers outside the range shown on the guide, if you feel that adjustments need to be made to fit your particular situation, area, climate, stand conditions or the producer's level of management.

NEW MEXICO

GUIDE FOR CARRYING CAPACITY BY MONTH

Type of Forage	Production and Mgt. Factors	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total AUM's
Tall fescue	High			0.40	1.40	2.15	2.15	0.55	0.50	0.65	1.40	0.95	0.50	10.65
	Medium			0.30	1.00	1.50	1.50	0.40	0.35	0.45	1.00	0.65	0.35	7.50
	Low			0.15	0.50	0.75	0.75	0.20	0.20	0.25	0.50	0.35	0.15	3.80
Wheatgrass (Tall) or Garrison Creeping Foxtail	High			0.20	1.40	1.85	1.85	0.90	0.35	0.75	1.30	0.45		9.05
	Medium			0.15	1.00	1.15	1.15	0.65	0.25	0.55	0.90	0.30		6.10
	Low			0.05	0.50	0.60	0.60	0.35	0.15	0.30	0.45	0.15		3.15
Smooth brome	High			0.15	1.25	1.65	1.65	0.80	0.30	0.70	1.20	0.30		8.00
	Medium			0.10	0.90	1.15	1.15	0.55	0.20	0.50	0.85	0.20		5.60
	Low				0.45	0.55	0.55	0.25	0.10	0.25	0.40	0.10		2.65
Orchardgrass	High			0.25	1.20	1.70	1.25	0.50	0.20	0.50	0.85	0.45		6.90
	Medium			0.15	0.85	1.20	0.90	0.35	0.15	0.35	0.60	0.30		4.85
	Low				0.40	0.60	0.45	0.20	0.10	0.20	0.30	0.15		2.40
Weeping lovegrass	High				0.30	1.00	1.10	0.55	0.55	1.10	0.55			5.15
	Medium				0.20	0.70	0.80	0.40	0.40	0.80	0.40			3.70
	Low				0.10	0.35	0.40	0.20	0.20	0.40	0.20			1.85
Timothy	High				0.70	1.00	0.70	0.20	0.20	0.30	0.35			3.45
	Medium				0.50	0.65	0.50	0.15	0.15	0.20	0.25			2.40
	Low				0.25	0.30	0.25	0.10	0.10	0.10	0.15			1.25
Forage Sorghums	High				0.55	1.00	1.00	0.20	0.05	0.20	0.35			3.35
	Medium				0.40	0.65	0.65	0.15	0.05	0.15	0.25			2.30
	Low				0.20	0.30	0.30	0.05		0.05	0.10			1.00
Winter Small Grain (Planted for Grain)	High			0.70	0.70						0.40	0.70	0.20	2.70
	Medium			0.50	0.50						0.30	0.50	0.15	1.95
	Low			0.25	0.25						0.15	0.25	0.05	0.95
Winter Small Grain (Not Harvested)	High			0.70	2.00	1.40					0.40	0.70	0.20	5.40
	Medium			0.50	1.50	1.00					0.30	0.50	0.15	3.95
	Low			0.25	0.75	0.50					0.15	0.25	0.05	1.95
Alfalfa	High			0.50	1.20	1.95	1.95	1.40	1.00	1.00	1.00	0.20		10.20
	Medium			0.35	0.85	1.35	1.35	1.00	0.70	0.70	0.70	0.15		7.15
	Low			0.15	0.40	0.65	0.65	0.50	0.35	0.35	0.35	0.10		3.50
Improved Bermudagrass	High					0.70	1.50	2.20	2.20	1.35	0.40			8.35
	Medium					0.35	0.75	1.10	1.10	0.70	0.20			4.20
	Low					0.20	0.40	0.60	0.60	0.40	0.10			2.30
Switchgrass	High				0.25	0.55	1.70	2.45	2.45	1.60	0.50	0.15		9.65
	Medium				0.20	0.40	1.20	1.70	1.70	1.15	0.35	0.10		6.80
	Low				0.10	0.20	0.60	0.85	0.85	0.60	0.15	0.05		3.40
Indiangrass	High				0.25	0.50	1.60	2.20	2.20	1.45	0.45	0.15		8.80
	Medium				0.20	0.35	1.10	1.55	1.55	1.00	0.30	0.10		6.15
	Low				0.10	0.15	0.55	0.80	0.80	0.50	0.15	0.05		3.10

Conversion Factors from Animal Unit Months (AUM) to Tons, Bales, of Hay Produced and Needed:

TONS

To get hay produced - AUM's x 0.6 = tons
To get hay needed   - AUM's x 0.3 = tons

BALES (60#)

Produced = animal months x 200
Needed   = animal months x 100

#Production Factors - consider level of such factors as irrigation, INM, fertilization, grazing and haying systems, weed and insect control.

NEW MEXICO

GUIDE FOR CARRYING CAPACITY BY MONTH

Type of Forage	Production and Mgt. Factors	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total AUM's
Sand bluestem	High				0.25	0.45	1.45	2.00	2.00	1.30	0.40	0.15		8.00
	Medium				0.20	0.30	1.00	1.40	1.40	0.90	0.30	0.10		5.60
	Low				0.10	0.15	0.50	0.70	0.70	0.45	0.15	0.05		2.80
Yellow bluestems	High					0.40	1.15	1.90	1.90	1.20	0.40			6.95
	Medium					0.30	0.80	1.35	1.35	0.85	0.30			4.95
	Low					0.15	0.40	0.65	0.70	0.40	0.15			2.45
Blue panicgrass or Kleingrass	High					0.60	1.45	2.10	2.10	1.35	0.45	0.15		8.20
	Medium					0.40	1.00	1.45	1.45	0.95	0.30	0.10		5.65
	Low					0.20	0.50	0.70	0.70	0.50	0.15	0.05		2.80
Green sprangletop	High					0.50	1.30	1.90	1.90	1.30	0.40	0.15		7.45
	Medium					0.35	0.90	1.35	1.35	0.90	0.30	0.10		5.25
	Low					0.25	0.45	0.65	0.65	0.45	0.15	0.05		2.65
Orchardgrass and legume mixture	High			0.30	1.35	1.90	1.40	0.55	0.20	0.55	0.95	0.50		7.70
	Medium			0.20	0.95	1.35	1.00	0.40	0.15	0.40	0.65	0.35		5.45
	Low			0.10	0.50	0.65	0.50	0.20	0.10	0.20	0.30	0.20		2.75
Bromegrass and legume mixture	High			0.15	1.40	1.85	1.85	0.90	0.35	0.80	1.35	0.35		9.00
	Medium			0.10	1.00	1.30	1.30	0.65	0.25	0.55	0.95	0.25		6.35
	Low			0.05	0.50	0.65	0.65	0.30	0.15	0.25	0.45	0.10		3.10
Fescue and legume mixture	High			0.45	1.55	2.40	2.40	0.60	0.55	0.70	1.55	1.05	0.55	11.80
	Medium			0.30	1.10	1.70	1.70	0.40	0.40	0.50	1.10	0.75	0.40	8.35
	Low			0.15	0.55	0.85	0.85	0.20	0.20	0.25	0.55	0.35	0.20	4.15
Orchardgrass and Alfalfa	High			0.30	1.45	2.05	1.50	0.60	0.25	0.60	1.00	0.55		8.30
	Medium			0.20	1.00	1.45	1.05	0.40	0.20	0.40	0.70	0.40		5.80
	Low			0.10	0.50	0.70	0.50	0.20	0.10	0.20	0.35	0.20		2.85
Bermudagrass and legume mixture	High					0.80	1.60	2.40	2.40	1.50	0.45			9.15
	Medium					0.40	0.80	1.20	1.20	0.75	0.20			4.55
	Low					0.20	0.40	0.60	0.60	0.30	0.10			2.20
Timothy and legume mixture	High				0.80	1.10	0.80	0.20	0.20	0.35	0.40			3.85
	Medium				0.55	0.80	0.55	0.15	0.15	0.25	0.30			2.75
	Low				0.25	0.40	0.30	0.10	0.10	0.15	0.15			1.45
Tall wheatgrass and Alfalfa	High				0.25	1.70	2.10	2.10	1.10	0.40	0.80	1.55	0.55	10.55
	Medium				0.20	1.20	1.50	1.50	0.80	0.30	0.55	1.10	0.40	7.55
	Low				0.10	0.60	0.75	0.75	0.40	0.15	0.30	0.55	0.20	3.80

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