

TECHNICAL NOTES

UNITED STATES DEPARTMENT OF AGRICULTURE
JULY 2008

NATURAL RESOURCES CONSERVATION SERVICE
ALEXANDRIA, LOUISIANA

GRAZING LANDS TECHNICAL NOTE NO. 3

CRITERIA FOR DETERMINING STAND ESTABLISHMENT: FORAGE AND BIOMASS PLANTING

INTRODUCED GRASSES AND LEGUMES

Usually establish within first growing season. An exception may be bahiagrass which may take 2 years. All other species should be evaluated at end of first growing season. If plants emerged and died due to frost or drought, evaluations can be made during first growing season. The months of September thru November are the best for conducting assessments.

NATIVE PLANTINGS

Native grasses and legumes may take more than one growing season to establish and should not be considered a failure until after the second season. If plants emerged and died due to frost or drought, evaluations can be made following first growing season.

METHOD OF MAKING DETERMINATIONS

For seeded species and broadcast Bermuda grass sprigs or tops, a step count method will provide an adequate means of estimating average number of plants per square foot.

- Step a 50 foot line transect across the field
- Count the established plants in a square foot at the end of your foot at points 0, 12.5 ft., 25 ft., 37.5 ft., and 50 ft. Record the number counted
- Add up the total number of plants counted and divide by the number of square feet that were checked. The resulting number indicates the number of plants/ft²

Example: You walked across a field and stopped 50 times to count the plants in a square foot. You counted a total of 20 plants. ($20/50=0.4$). This stand would be considered a failure.

Table 1. Plots - the following will be the minimum number of transects taken.

Field Size (acres)	Transects	Field Size (acres)	Transects
1-4			
5-9			
10-20			
21-40	20	>100	.005 x field size (acres) x 100



Table 2. Criteria for determining establishment – pasture planting

Stands	Acceptable Numbers	Notes
Sod forming grasses, seeded grasses, and legumes	1 healthy vigorous seedling/ft²	Usually establish within first growing season. An exception may be bahiagrass which may take 2 years.
Bunch Grasses	3 or more healthy vigorous seedlings/ft²	If planting eastern gamagrass in rows, refer to Plant Materials Technical Note No. 9 – Evaluating Eastern Gamagrass Stands When Planted in 28”- 40” rows.
Sprigged Bermudagrass	>10 healthy vigorous plants/100 feet of row	For bermudagrass that is planted with a sprigger in rows, pick several areas and count the live plants per 100 feet of row.

Johanna G. Pate
 Rangeland Management Specialist

Tally Sheet For Recording Herbaceous Establishment Data

Producers Name: _____ Date: _____

Tract Number: _____

Field Number: _____

Acres: _____

Species Planted: _____

Field Size (ac)	Transect Number	Plot 1 (0 ft)	Plot 2 (12.5ft)	Plot 3 (25ft)	Plot 4 (37.5ft)	Plot 5 (50 ft)	Total Plants on Transect
	1						
1.0	2						
1.5	3						
2.0	4						
2.5	5						
3.0	6						
3.5	7						
4.0	8						
4.5	9						
5-10	10						
	11						
	12						
	13						
	14						
11-20	15						
	16						
	17						
	18						
	19						
21-40	20						
	21						
	22						
	23						
	24						
41-60	25						
	26						
	27						
	28						
	29						
61-80	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	38						
	39						
81-100	40						
Fields Greater Than 100 Ac. (0.005 x acres x 100)	41						
	42						
	43						
	44						
	45						
	46						
	47						
	48						
	49						
	50						