



## Forage Research in Texas

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(INFLUENCE OF) DEFOLIATION (<sup>HT</sup>HEIGHT) AND (<sup>FREQ</sup>FREQUENCY)

ON YIELD AND

(IN VITRO DRY-MATTER DIGESTIBILITY) OF JOSE TALL WHEATGRASS

IVDMD

OBJECTIVES:

To determine the influence of defoliation height and frequency on dry-matter yield and in vitro dry-matter digestibility of 'Jose' tall wheatgrass in the Trans-Pecos area.

PROCEDURE:

Two locations were selected for the study. One site was located on the Texas Agricultural Experiment Station at Pecos under a moveable, solid-set, sprinkler system on a Hoban silty clay loam soil. The other was located off-station under a center pivot irrigation system on a Verhalen clay loam soil. Both locations contained one year old stands of Jose wheatgrass. Plots were divided into six subplots and replicated four times at each location. The following clipping treatments were used: clip to 2-inch stubble height every seven days; clip to 5-inch stubble height every seven days; clip to a 2-inch stubble height every 21 days; clip to 5-inch stubble height every 21 days, and quarterly clip to a 2-inch stubble height in November, February, May, and August. The sixth subplot was sampled every seven days for quality only and then clipped to 2-inch stubble height at the end of each quarter. Sub-samples for in vitro dry-matter digestibility (IVDMD) were taken at each harvest. Yields were determined by conversion of field weights to dry-matter basis from oven dried sub-samples collected at each harvest. Carbohydrate reserve samples were also collected at monthly intervals on all 2-inch and 5-inch clipping heights.

RESULTS AND DISCUSSION:

Total dry-matter yields obtained from the various clipping heights and frequencies are shown in Table 1. These yields represent the first years data. IVDMD results are summarized by month and shown in Table 2. Data from the quality treatment which was clipped every seven days is not shown. Results from carbohydrate reserve samples are not available at this time.



Table 1. Dry-matter yield of Jose tall wheatgrass derived from various clipping heights and intervals.

Location	Harvest height and frequency				
	2"-7 days	2"-21 days	5"-7 days	5"-21 days	2"-90 days
Pecos Station	9,354	9,607	4,778	7,298	10,569
Off-Station	8,171	6,259	3,952	4,847	13,125

Table 2. *In vitro* dry matter digestibility from various clipping heights and frequencies of Jose Tall Wheatgrass summarized by month.

Month	Harvest height and frequency *				
	2"-7 days	2"-21 days	5"-7 days	5"-21 days	2"-90 days
November	61	61	66	63	64
December	58	59	67	69	
January	66	62	67	64	
February **		72		65	67
March	72	72	73	72	
April	72	67	69	66	
May	67	60	65	63	57
June	64	63	62	64	
July	64	64	62	61	
August	63	59	62	60	56

\* Includes data from both study locations.

\*\* Not enough growth on 7 day intervals to sample.