File: ltfetch.xls

ltfetch.xls refers to long-term fetch measurements on selected

transects established in USFS Studies FSRM 1706-09, FSRM 1706-12, FSRM

1706-15, and FSRM 1706-25. This file includes all measures of fetch made on

these transects in 2009 and 2012.

Fetch is the measure of distance between objects, and in this case the

measure is from a point on the transect to the closest grass and shrub

plant respectively. Measures of fetch can indicate the size of base

soil patches (see Herrick et al. 2005. Monitoring Manual for Grassland,

Shrubland and Savannas [2 vols]. USDA Jornada Experimental Range, Las

Cruces, NM. ISBN-13: 978-0975555200.). Fetch can also indicate the

spatial pattern of bare patches, and the degree to which bare patches

are not randomly distributed (see Kuehl et al. 2001. Detecting

fragmentation of cover with line intercept measures in simulations of

Desert Grassland conditions. Journal of Range Management 54:61-66.).

This file provides the distance to the nearest perennial grass base and

nearest shrub canopy at each 4’ interval along the 100-ft. transect

tape (starting at 4’ and ending at 100’). Measurements were recorded to

the nearest half inch.

Additionally, the nearest perennial grasses were recorded as either

under the canopy of any shrub species or out in the open. The column labeled “Canopy Cover O/U” in the spreadsheet indicates that grasses were under shrub cover with a “1” or that grasses were out in the open with a “0”.

Each nearest perennial grass or shrub species was recorded by the

scientific name four-letter code. The code “UNKN” indicates an

unidentified perennial grass or shrub. In this file ARIS refers to all

perennial Aristida spp., including A. glabrata formerly recorded as

ARGL1 or ARGL. As for the species Bouteloua chondrosioides (BOCH), Bouteloua hirsuta (BOHI), and Bouteloua repens (BOFI), use caution in using the data due to the possible misidentification of those species at their vegetative stage. It may be wise to lump these species together for analysis.

The column labeled “Position on Transect” indicates the position (in

feet) from which each measurement was taken along the 100-feet transect

tape. A measurement was taken from the transect tape at 4’, 8’, 12’,

16’, and so on up to 100’.

Sources of vegetation data were the original field data sheets.

A value of -9999 in a field means that no data were available because a

reading was not made for that date.

Measurements were taken on permanent 100-ft. transects in 11 pastures.

Mesquite treatments performed on transects during the USFS studies are

coded as follows: DEAD for transects on which mesquite (Prosopis

velutina) was killed in USFS Studies FSRM 1706-09 and FSRM 1706-12, and

LIVE for transects on which mesquite was left untreated. The 1994 burn

occurred in the first week of June 1994, and 23 transects were burned

at that time. The occurrence of the fire is noted in the spreadsheet

column "1994 Burn".

Grazing records for the USFS Studies and other individual study

protocols are available in the study plans for FSRM 1706-09, FSRM 1706-

12, FSRM 1706-15, and FSRM 1706-25. A grazing plan summary for

subsequent years is available on the front page of the Santa Rita web

site and in the long-term record section under “Livestock Grazing

History”, but note the following clarifications:

A grazing year begins on November 1 and ends on October 31 of the

following year.

Pasture 2S from Study 1706-25 was divided into two parts after the

1984-85 grazing year. In the table, 2S refers to the western part of

the original pasture, which contains transects 1-4. The eastern part of

2S (called 2SE and containing transects 5-10) became part of the UA

Cell in 1987-88.

The UA (HRM) Cell was formed in 1987-88 from pastures 2SE, 21, and 22;

this unit has eight cells. The cattle grazing the UA Cell are rotated

through the eight cells during each grazing year.

Pasture 2S was grazed in a Santa Rita three-pasture rotation system

with pastures 4 and 12A from 1985-86 to 2006.

Pastures 6A-6B were grazed in a Santa Rita three-pasture rotation

system with pasture 6D from 1984-85 to 2006.

Sources of grazing data were SRER stocking plans for the Santa Rita

Ranch except for 1987-88 and 1989-90. No plans were available for these

two years so grazing season is based on information from Santa Rita

Ranch personnel.

ltfetchnotes.txt

06 January 2022