USE OF HERBICIDES TO MEET FUEL MANAGEMENT OBJECTIVES (in the Southern Great Plains)

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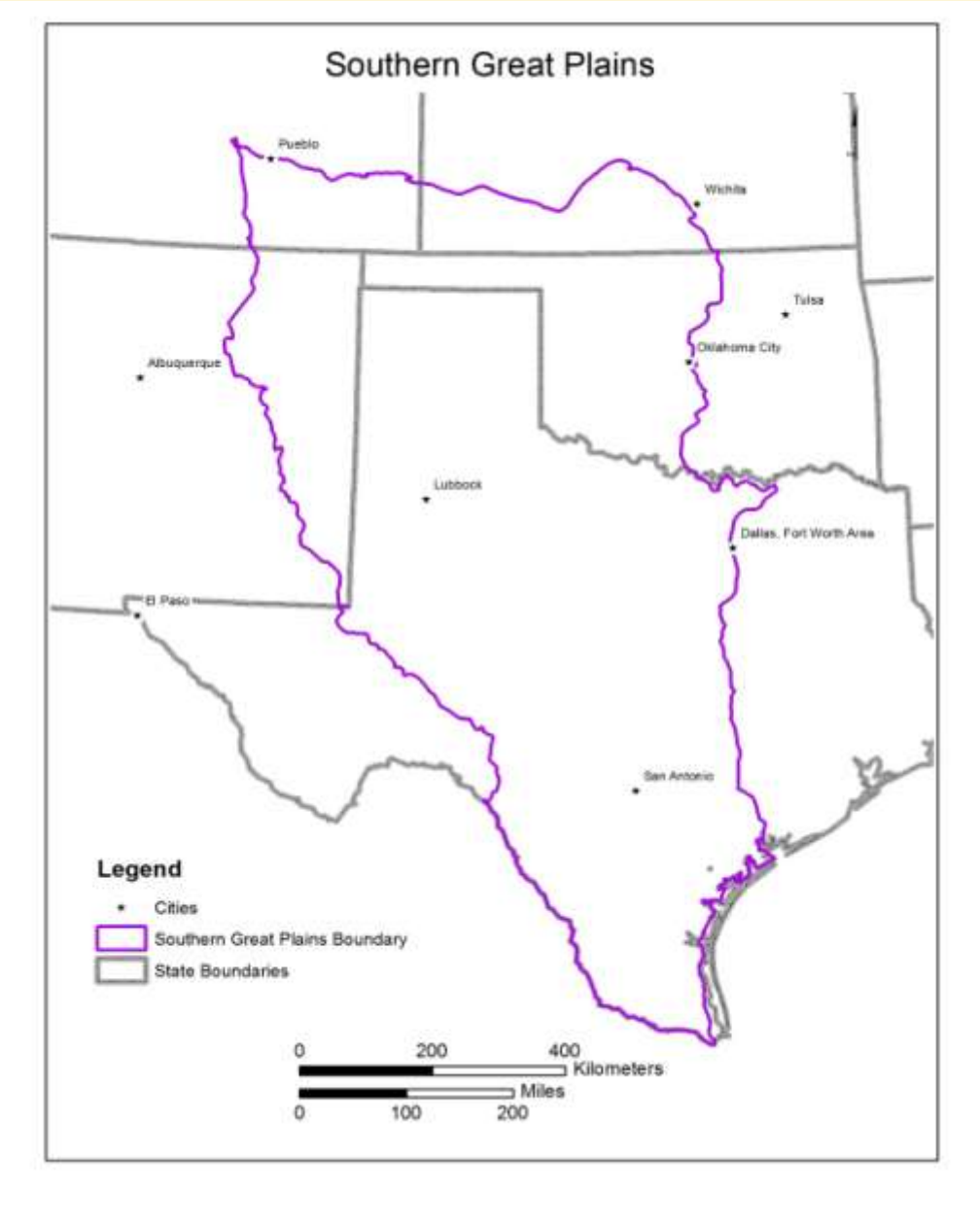


Southern Great Plains (modified from Kuchler)

Three Facets of Fuel Management

1. Reduce woody vegetation to lessen ecological impact of wildfires
2. Manage grass production
3. Manipulate wildlife habitat

Components of Herbicide Usage

1. Sprouting vs. Non-sprouting Species

2. Woody vs. Suffrutescent Species

3. Perennial vs. Annual Species

4. Method of Herbicide Application

   Aerial, IPT, Basal, Soil

Sprouting Species

Stand of mesquite in central and west Texas

Basal bud zone of mesquite

Top-killed mesquite with subsequent resprouting

Typical stand of juniper in Texas

Juniper resprouts

Stand of huisache in south Texas

Running live oak growing
on sandy soil in south Texas

Density of running live oak

Sand shinnery oak growing in west Texas

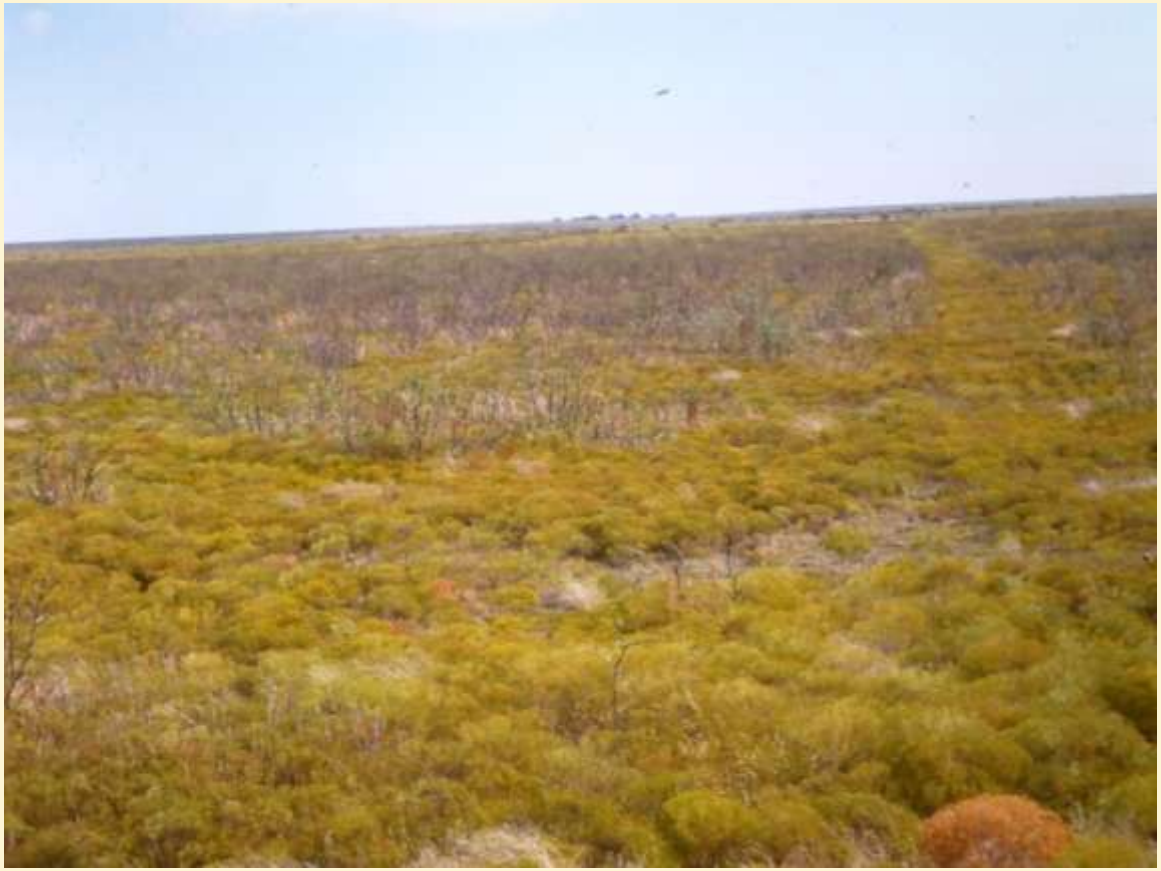
Sand shinnery oak with minimal associated herbaceous vegetation

Non-Sprouting Species (from the basal crown)

Broom snakeweed growing in eastern New Mexico

(Note the paucity of herbaceous vegetation growing with broom snakeweed)

Grass production following broom snakeweed control in eastern New Mexico



Common (annual) broomweed infestation

Old growth common (annual) broomweed

Comments

Wet years followed by dry years in many situations presents a greater fire hazard than the woody species inhabiting the plant community;

For example, the fires of 2006 in the Panhandle of Texas occurred where the vegetation was dominated by blue grama and buffalograss as well as the rough breaks dominated by mid to tall grasses

Therefore, grazing management is paramount in fuel management in the Southern Great Plains

Conclusions

Use of herbicides for fuel management is species dependent

In many cases, it is more important to control suffrutescent shrubs and annual “weeds” than it is to control the dominant woody vegetation

Timing of herbicide application is extremely important in obtaining maximum control of the target species, woody or otherwise

Regardless of the species to be controlled by herbicides, grazing management following control is of paramount importance

Final Comment

Use of herbicides to manage fuel on Southern Great Plains rangelands is a decision that one must make in prior proper planning relative to management of their resources and not decided under duress on the “spur of the moment”

THANKS

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