



Foro Binacional (México-USA)
sobre **Desertificación y Sequía**
en relación con el Cambio Climático

Zacatecas, 10 al 12 de agosto de 2011



Comisión Nacional Forestal

GOBIERNO
FEDERAL

SEMARNAT





Acciones de manejo y restauración de ecosistemas como alternativas de mitigación de la sequía.



Ing. José Manuel Pérez Cantú
Director de Restauración y Reforestación



Pronatura a nivel nacional

- Organización mexicana
- Fundada en 1981
- 17 estados de México
- 200 empleados de tiempo completo

7 representaciones regionales:

- Pronatura Sur
- Pronatura Península de Yucatán
- Pronatura Veracruz
- Pronatura Noroeste
- Pronatura Noreste
- Pronatura Centro y Occidente
- Pronatura Mexico



Pronatura Noreste

- Asociación Civil, sin fines de lucro
- Creada en 1997
- 40 empleados



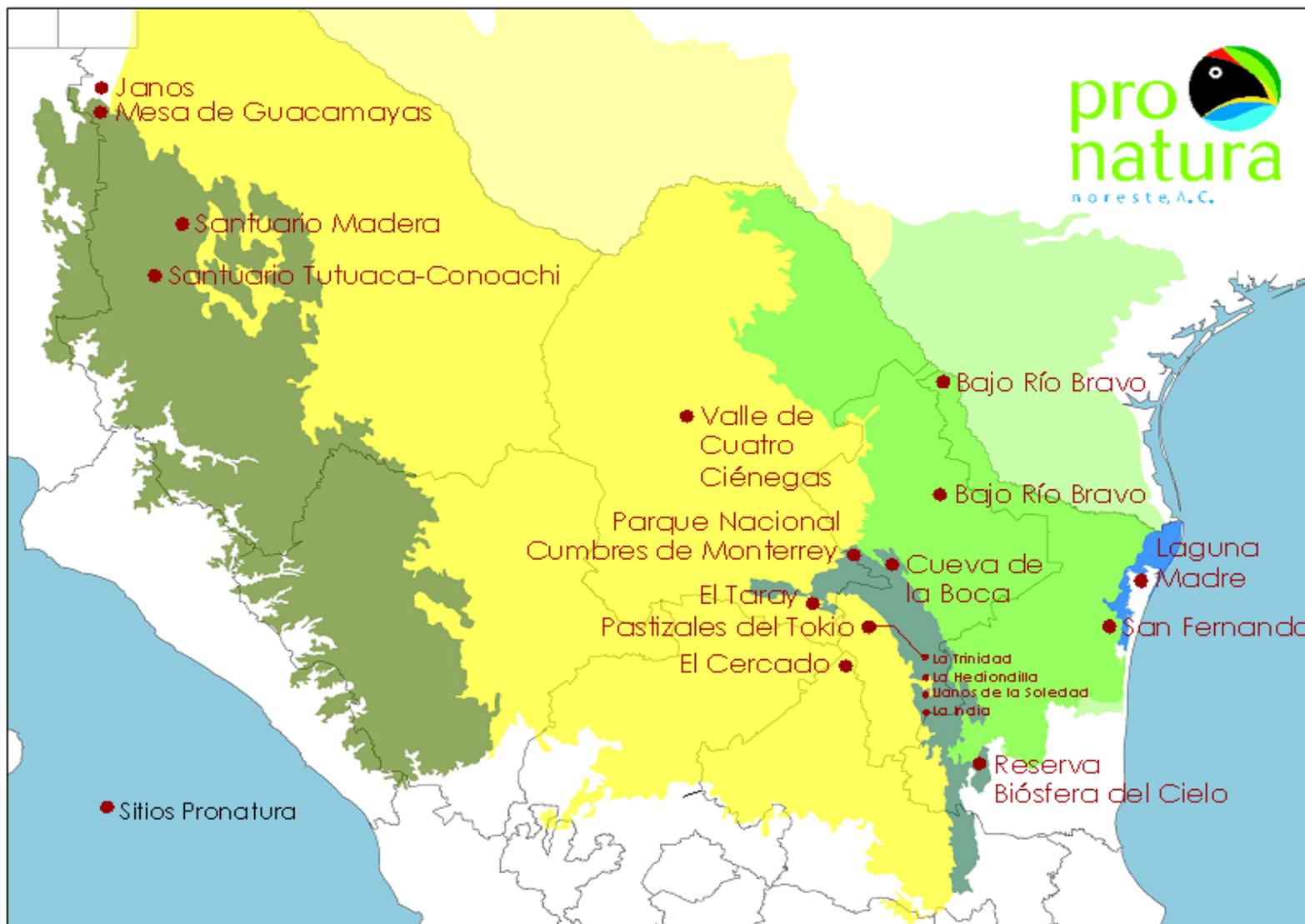


Misión

Conservar la flora, la fauna y los ecosistemas prioritarios del Noreste de México, promoviendo un desarrollo de la sociedad en armonía con la naturaleza.



SITIOS PRONATURA





Programa de Restauración

Desde 2003 PRONATURA Noreste con el apoyo de la SEMARNAT Nuevo León y gracias a compensaciones ecológicas de Kinder-Morgan Gas Natural, C.F.E. y PEMEX promueven la Recuperación de Ecosistemas Degradados principalmente por el Sobrepastoreo mediante el Programa de Restauración.





Problemática

- **Perdida de productividad de los ranchos ganaderos**
- **Disminución de la biodiversidad**
- **Falta de recarga de los mantos acuíferos**
- **Perdida de suelo**
- **Contaminación de las ciudades y ríos por polvo**
- **Desertificación entre otros**



Zacatecas, 10 al 12 de agosto de 2011



Pronatura basado en los trabajos de restauración que se han realizado en el campo Santa Maria de Cemex en Lampazos Nuevo León





pro
natura

asociación civil

y

**Dependencias e
Instituciones Públicas
y Privadas**

Programa de Restauración de Ecosistemas Degradados del Noreste de México

Basado en la aplicación del rodillo doble aereador



Equipo del Programa



Un tractor agrícola John Deere modelo 8770 de 300 h.p.

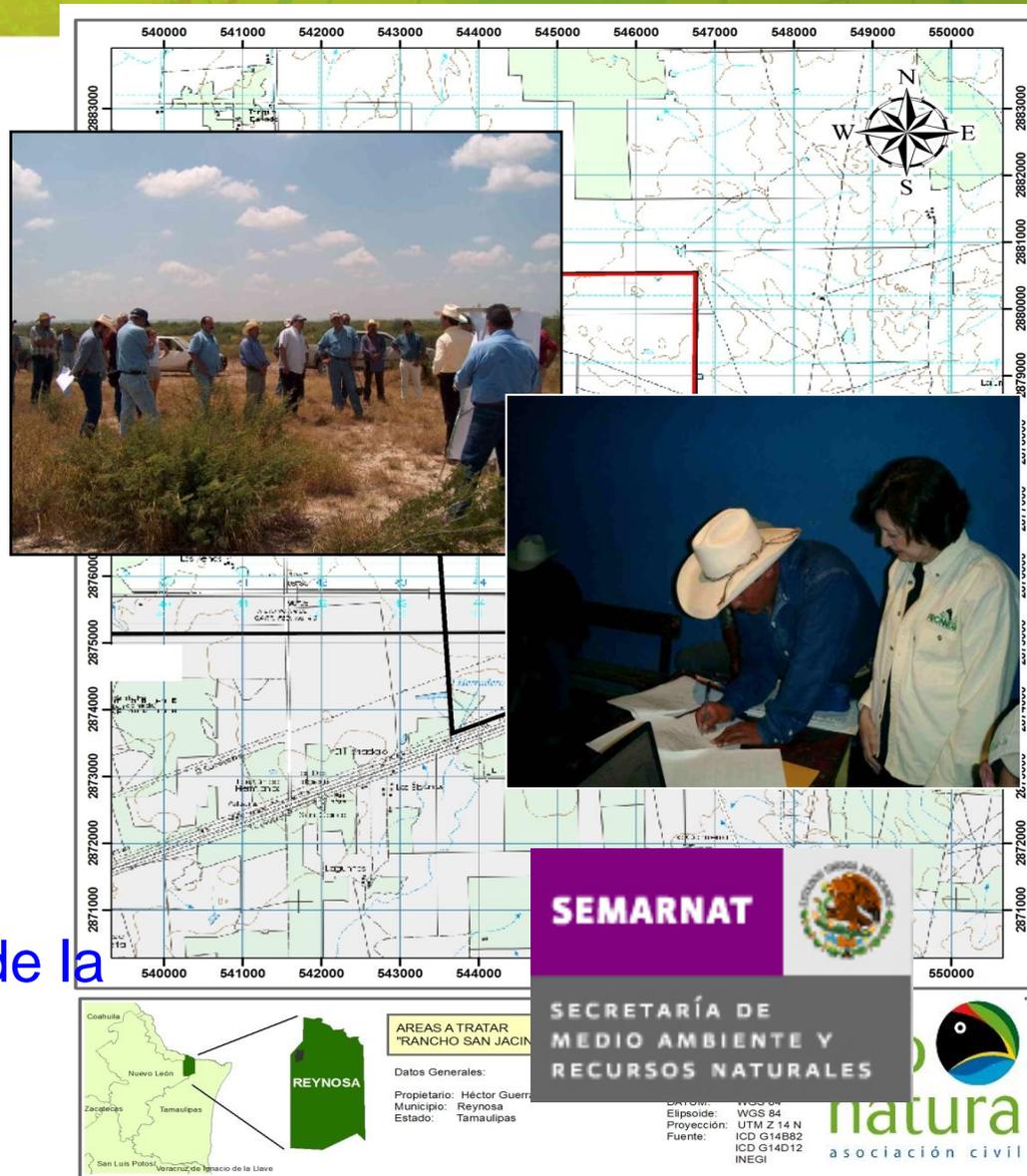
Un tractor agrícola John Deere Modelo 7500 de 155 h.p.

2 equipos de dos rodillos aeradores en tandem que van de 10 a 12 pies de largo por 30" de diámetro.



Metodología

- Identificación de áreas
- Contacto con Productores
- Firma de Contratos de Restauración (implica descanso de áreas)
- Obtención del permiso por parte de la SEMARNAT en el Estado





Evolución



5 meses después



Antes



Después





Antes



Despues

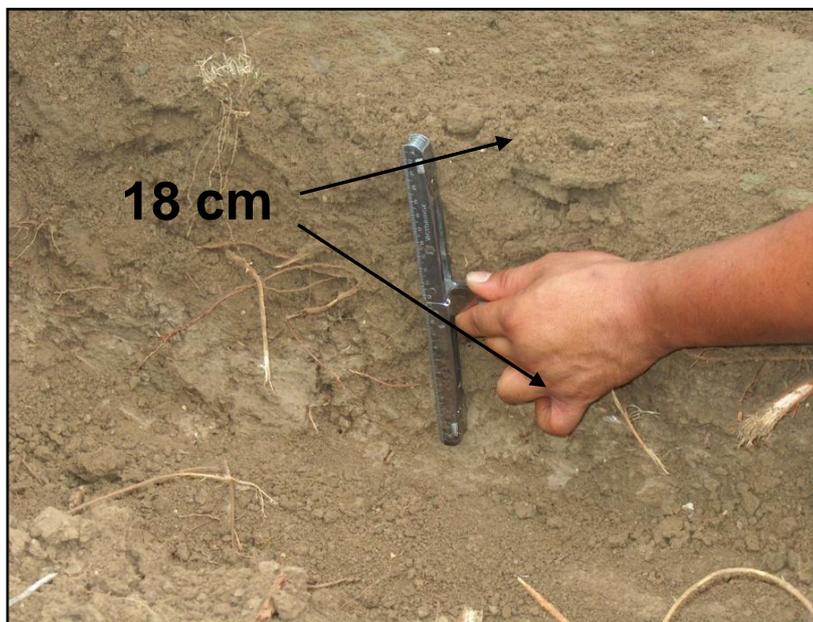


cate



Resultados

- 29,000 hectáreas tratadas al día de hoy.
 - Se han trabajado 65 ranchos en Nuevo León, Coahuila y Tamaulipas.
 - Se dejó de perder 126,500 ton. de suelo, y
 - Se han captado alrededor de 5.98 millones de m³ de lluvia.



PROGRAMA BI-NACIONAL DE RESTAURACIÓN ECOLÓGICA

PARTICIPANTES



Zacatecas, 10 al 12 de agosto de 2011

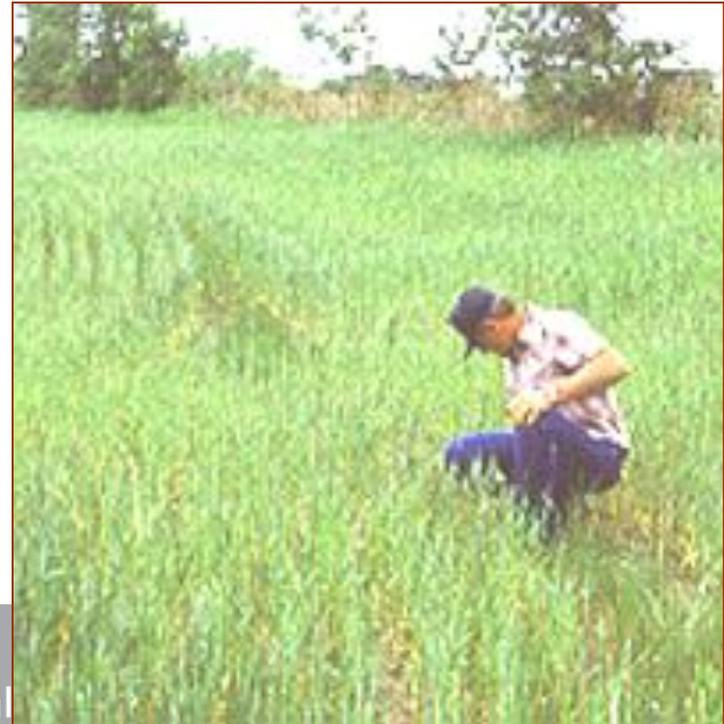


PROGRAMA BI-NACIONAL DE RESTAURACIÓN ECOLÓGICA

PARTICIPANTES

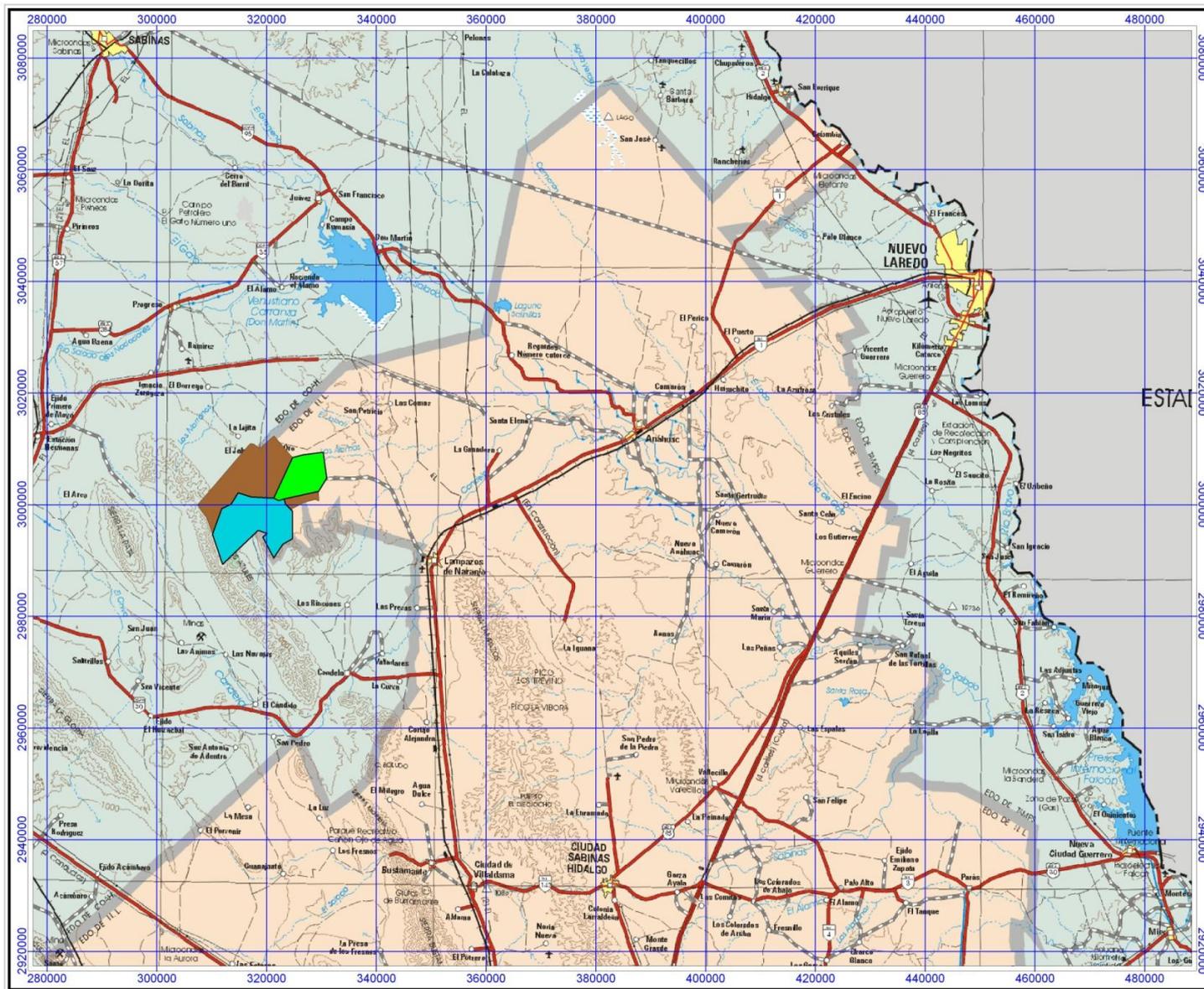


- Incrementar la **Biodiversidad**
- Crear centros de germoplasma.
- Transferir Tecnología
- Utilizar técnicas probadas de restauración



cas, 10 al





RANCHO EL JABALÍ

Plano de Ubicación

Estados: Coahuila y Nuevo León
Municipios: Progreso y Lampazos
Nombre del Predio: Rancho El Jabalí

LOCALIZACIÓN



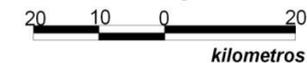
SIMBOLOGÍA

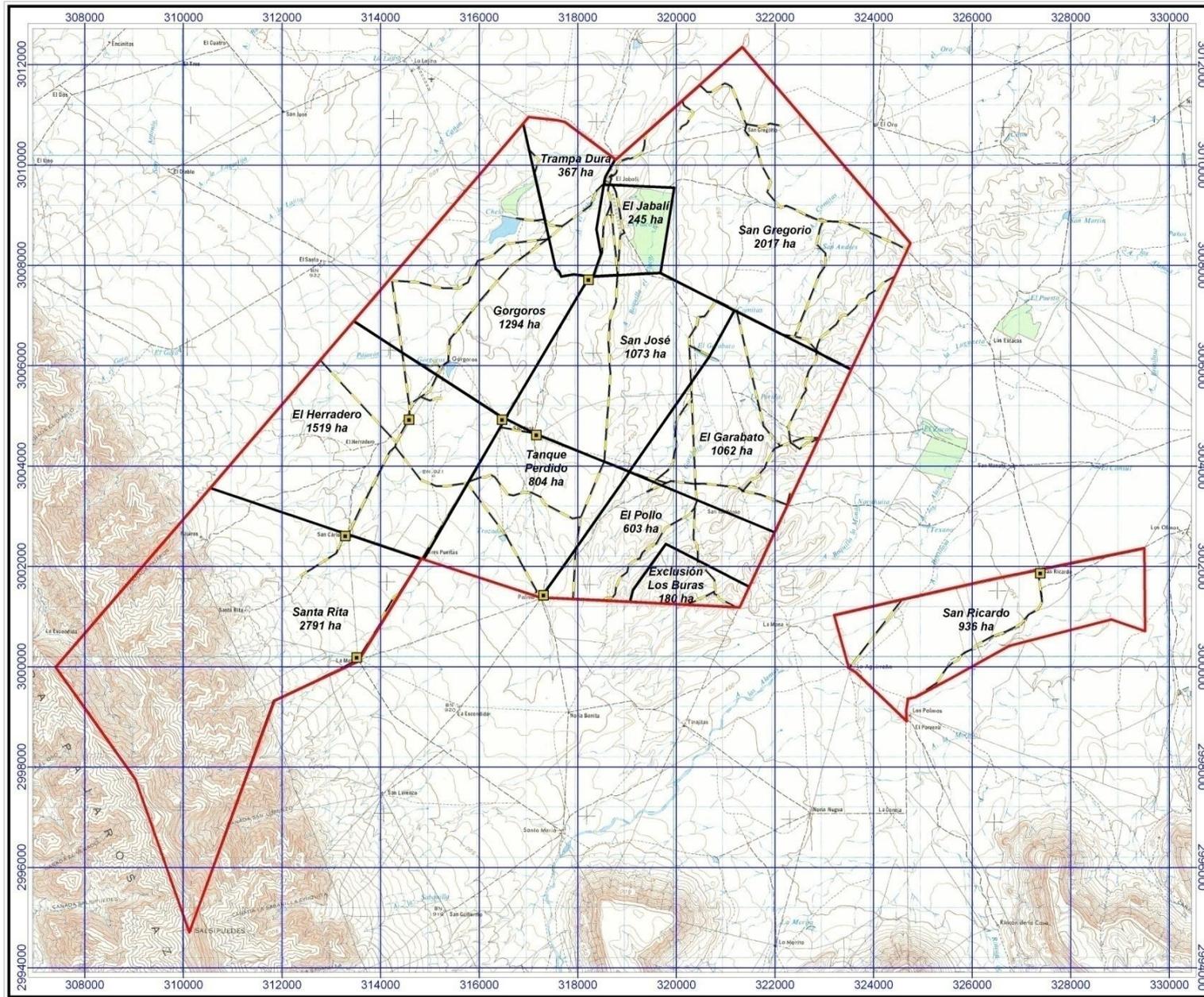
- Polígonos del Jabalí:
- Polígono San Manolo:
- Polígono Santa María:
- Carretera:
- Terracería:

DATOS CARTOGRÁFICOS

Proyección: UTM
Zona: 14
Datum: WGS84
Esferoide: WGS84
Fuente: Condensado Estatal
INEGI Nuevo León

Escala gráfica



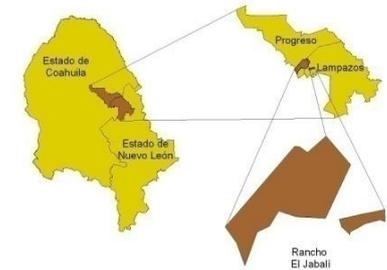


RANCHO EL JABALÍ

Plano de Potreros y caminos

Estados: Coahuila y Nuevo León
Municipios: Progreso y Lampazos
Nombre del Predio: Rancho El Jabali

LOCALIZACIÓN

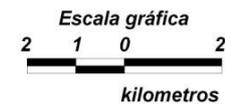


SIMBOLOGÍA

- Polígono del Predio:
- Potreros:
- Corrales de Manejo:
- Caminos:
- Presas:

DATOS CARTOGRÁFICOS

Proyección: UTM
Zona: 14
Datum: WGS84
Esferoide: WGS84
Fuente: Carta topográfica INEGI G14A44 1:50,000





USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

Home About Soils Help Contact Us

You are here: Web Soil Survey Home

Search
Enter Keywords
All NRCS Sites

Browse by Subject

- Soils Home
- National Cooperative Soil Survey (NCSS)
- Archived Soil Surveys
- Status Maps
- Official Soil Series Descriptions (OSD)
- Soil Series Extent Mapping Tool
- Soil Data Mart
- Geospatial Data Gateway
- eFOTG
- National Soil Characterization Data
- Soil Geochemistry Spatial Database
- Soil Quality
- Soil Geography
- Geospatial One Stop

The simple yet powerful way to access and use soil data.

START WSS

I Want To...

- Start Web Soil Survey (WSS)
- Know the requirements for running Web Soil Survey
- Know whether Web Soil Survey works in my web browser
- Know the Web Soil Survey hours of operation
- Find what areas of the U.S. have soil data

Announcements/Events

- Web Soil Survey 2.1 has been released! View description of new features.

I Want Help With...

- How to use Web Soil Survey
- How to use Web Soil Survey Online Help
- Known Problems and Workarounds
- Frequently Asked Questions
- Citing Web Soil Survey as a source of soils data

Welcome to Web Soil Survey (WSS)

Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information.

Three Basic Steps

1 Define.

Area of Interest (AOI) Use the Area of Interest tab to define your area of interest.

2 View/Explore.

Soil Map Click the Soil Map tab

Tips & Shortcuts



Web Soil Survey - Mozilla Firefox
http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

Contact Us | Download Soils Data | Archived Soil Surveys | Soil Survey Status | Glossary | Preferences | Logout | Help

Area of Interest (AOI) | Soil Map | **Soil Data Explorer** | Shopping Cart (Free)

View Soil Information By Use: All Uses [Printable Version] [Add to Shopping Cart]

Intro to Soils | **Suitabilities and Limitations for Use** | Soil Properties and Qualities | Ecological Site Assessment | Soil Reports

Search

Suitabilities and Limitations Ratings

Open All | Close All

- Building Site Development
- Construction Materials
- Disaster Recovery Planning
- Land Classifications
- Land Management**
 - Construction Limitations for Haul Roads and Log Landings
 - Conventional Tillage (TX)
 - Erosion Hazard (Off-Road, Off-Trail)
 - Erosion Hazard (Road, Trail)
 - Fencing, Post Depth Less Than 24 inches (TX)
 - Fencing, Post Depth Less Than 36 inches (TX)
 - Filter Strips (TX)
 - Harvest Equipment Operability
 - Mechanical Site Preparation (Deep)
 - Mechanical Site Preparation (Surface)
 - No-Till (TX)
 - Potential for Damage by Fire
 - Potential for Seedling Mortality
 - Ranch Access Roads (TX)
 - Rangeland Chaining (TX)

Terminado

Microsoft PowerPoint ... ArcView GIS 3.2 Web Soil Survey - Mo... caratula [2:3] : ACD ... Area de interes [1:2] ... 10:49 p.m.

Información sobre disponibilidad y limitaciones de uso



Web Soil Survey - Mozilla Firefox

Archivo Editar Ver Historial Marcadores Herramientas Ayuda

http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Web Soil Survey - Home

Land Classifications

Conservation Tree and Shrub Group

Ecological Site ID

[View Description](#) [View Rating](#)

View Options

Map

Table

Description of Rating

Rating Options

Detailed Description

Basic Options

Class NRCs Rangeland Site

Advanced Options

[View Description](#) [View Rating](#)

Ecological Site Name

Farmland Classification

Forage Suitability Group ID (Component Table)

Hydric Rating by Map Unit

Irrigated Capability Class

Irrigated Capability Subclass

Nonirrigated Capability Class

Nonirrigated Capability Subclass

Soil Taxonomy Classification

Land Management [?](#) [?](#)

Recreational Development [?](#) [?](#)

Sanitary Facilities [?](#) [?](#)

Vegetative Productivity [?](#) [?](#)

Waste Management [?](#) [?](#)

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Tables — Ecological Site ID: NRCs Rangeland Site — Summary By Map Unit

Predio El Jabali, parts of Lampazos de Naranjo, Nuevo Leon and Progresso, Coahuila Municipalities, Mexico

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2433479	Asociacion de Doss-Langtry, con pendiente de 1 a 5 por ciento	R081BY343TX	2,610.0	7.5%
2433481	Agua		55.5	0.2%
2433483	Asociacion de Webb, con pendiente de 5 a 9 por ciento	R083BY411TX	2,198.5	67.4%

Terminado

Microsoft PowerPoint ... ArcView GIS 3.2 Web Soil Survey - Mo... caratula [2:3] : ACD ... Area de interes [1:2] ... limitaciones de uso [1...

10:55 p.m.

Identificación de sitios ecológicos



Zacatecas, 10 al 12 de agosto de 2011





Web Soil Survey - Mozilla Firefox

http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Search

Ecological Sites

Open All Close All

All Ecological Sites

R081AY309TX — LOW STONY HILL 14-19" PZ

R081BY324TX — Clay Flat 23-31" PZ

This Ecological Site

1. Midgrass Prairie Community

View Plant Community Info

View Options

Plant Community Photos

Plant Community Description

Plant Community Tables

- Annual Production
- Plant Species Composition
- Plant Growth Curve

View Plant Community Info

2. Tobosa/Mixed-grass Savannah Community

3. Mesquite/Mixed-Brush Shortgrass Community

4. Cropland Community

5. Pastureland Community

6. 'Go Back Land' Community

R081BY334TX — Loamy Bottomland 19-23" PZ

R081BY343TX — Shallow 23-31" PZ

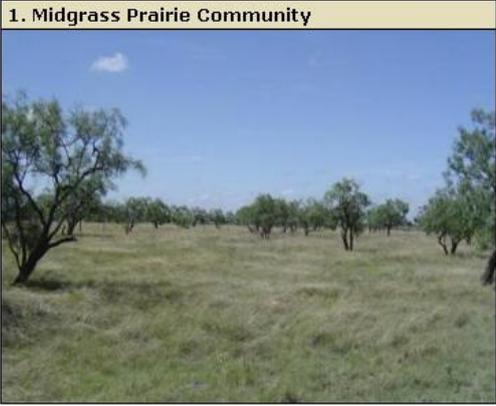
R081DY297TX — Gravelly 8-14" PZ

R083AY386TX — Gravelly Ridge 20-35" PZ

Terminado

Plant Community Photos — 1. Midgrass Prairie Community

1. Midgrass Prairie Community



Description — 1. Midgrass Prairie Community

The Historic Climax Plant Community (HCPC) for this site was a fire induced midgrass prairie. Woody species made up less than 5 percent of the herbage production. Tobosa, being tolerant of repeated fires made up as much as 30 percent composition in the western portion of the area, but decreased in dominance from west to east. Sideoats grama, feathery bluestems, vine mesquite (*Panicum obtusum*), Arizona cottontop (*Digitaria californica*), Texas cupgrass (*Eriochloa sericea*) and plain bristlegass (*Setaria leucopila*) made up 30 to 45 percent. Buffalograss and curlymesquite were common shortgrasses. Texas wintergrass (*Nassella leucotricha*), wildryes (*Elymus* spp) and Western wheatgrass (*Pascopyrum smithii*) were important parts of the cool-season component. Climax forbs included Engelmann's daisy (*Engelmannia peristenia*), ruellia (*Ruellia* spp.), sida (*Sida* spp.) half-shrub sundrop (*Calylophus serrulatus*) and bundleflower (*Desmanthus* spp.). Climax shrubs were scarce but probably included fire resistant species as sumac (*Rhus* spp.), greenbriar (*Smilax* spp.), pricklypear (*Opuntia* spp.) and bumelia (*Sideroxylon lanuginosum*). Oaks (*Quercus* spp.) and mesquite (*Prosopis glandulosa*) were probably also present but kept as scattered multi-stemmed shrubs by the repeated wildfires.

The Midgrass Prairie Community (1) produced as much as 3500 pounds herbage in good moisture years and 600 pounds or less in dry years. Annual production declines from east to west due to the decline in precipitation amounts. Grasses contribute up to 95 percent of the total annual production. The midgrasses aided in the infiltration of rainfall into the moderately permeable soil and reduced runoff. Litter and organic matter buildup was limited by the dry climate. The Midgrass Prairie Community (1) furnished good habitat for grass eating type animals such as bison, pronghorn antelope, horses and cattle.

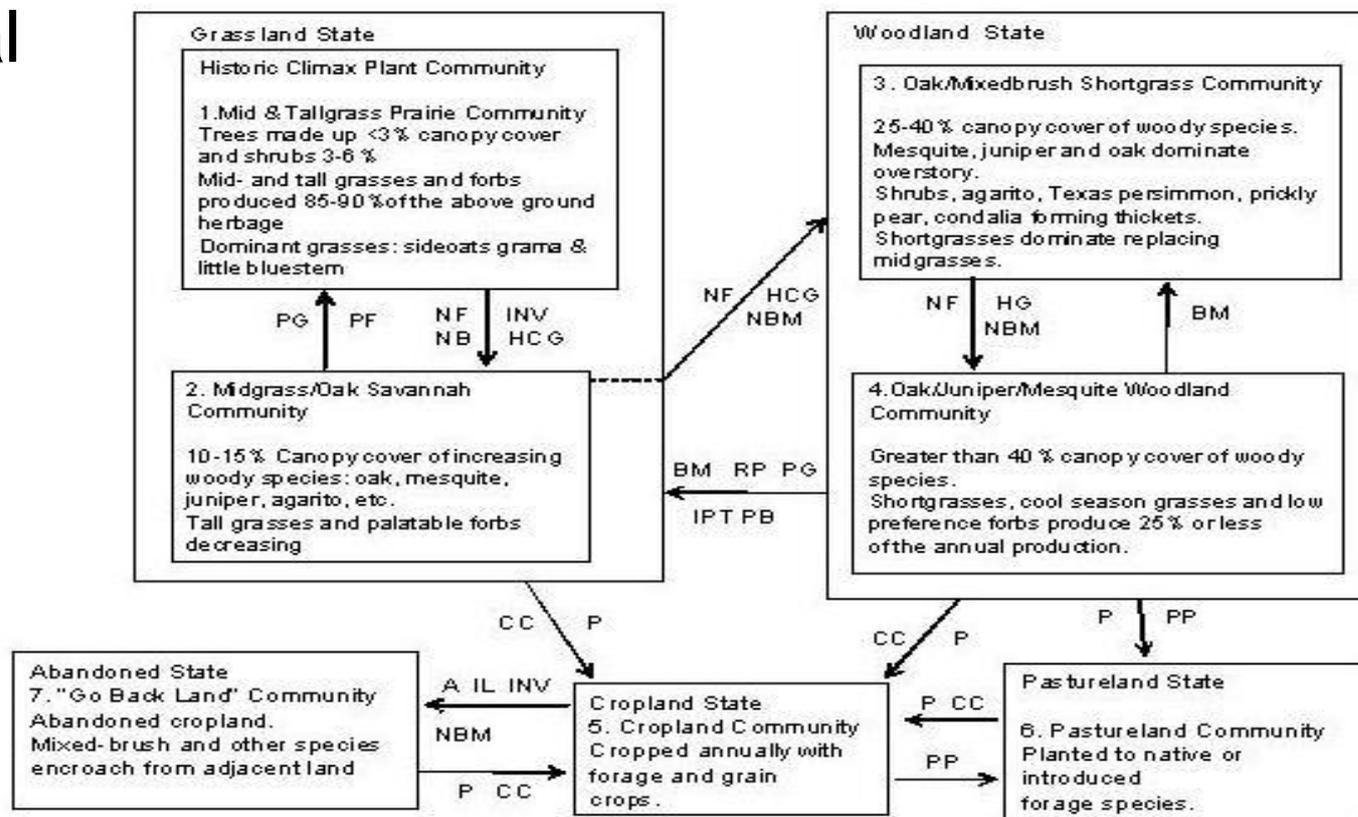
The HCPC can be maintained with proper stocking and prescribed burning. The decision as to the kind of livestock and numbers stocked is dependent on the current annual forage production and competition from other herbivores. With continuous overgrazing, decrease in intensity and frequency of fires and no brush management, this plant community will transition rapidly to the Tobosa/Mixed-grass Savannah Community (2).

Tables — 1. Midgrass Prairie Community



Dinámica de la comunidad vegetal del sitio

Shallow PE 31-44



BM = Brush Management
NBM = No Brush Management
PB = Prescribed Burning
RP = Range Planting
IL = Idle
CC = Crop Cultivation
PP = Pasture Planting

LEGEND

HCG = Heavy Continuous Grazing
INV = Brush Invasion
NF = No Fire
PG = Prescribed Burning
A = Abandonment
P = Plow







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UN GRAN RETO

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Gracias.....



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