# PANHANDLE WILDLIFE MANAGEMENT AREAS





## MATADOR WMA































































### MATADOR WILDLIFE MANAGEMENT AREA

## TADOR WILDLIFE NAGEMENT AREA

MATADOR WILDLIFE MANAGEMENT ARE

#### MATADOR WILDLIFE MANAGEMENT AREA

MATADOR WILDLIFF MANAGEMENT ARE



# MANAGEMENT AREA

MATADOR WILD MANAGEM

AREA



## YOAKUM DUNES WMA











# Effects of Agriculture on Mule Deer in the Texas Panhandle

David Hewitt - CKWRI Shawn Gray & Dana Wright - TPWD Warren Conway - TTU

## Mule Deer Management in the Panhandle

- Agriculture may:
  - Cause deer to move
  - Change deer survival
  - Influence fawn production
  - Enable deer to grow larger
- Interaction with Ag important for management
  - Linking surveys to hunting seasons
  - Appropriate harvest levels
  - Deer depredation of crops

# **Study Objectives**

- 1. Evaluate sex- and age-specific mule deer movements in relation to agriculture crops and other habitat components.
- 2. Investigate the effect of agriculture on survival of adult and fawn mule deer.



# Study Area Requirements Large blocks of rangeland and agriculture Diversity of crops preferred At least moderate mule deer populations Interested landowners

## West Central Rolling Plains: Year One

• Study Site



- Catch mule deer in October
- 21 male and 22 female adults
- 30 fawns



- Record data from each deer
  - Sex and age
  - Body weight / length
  - Body condition
  - Females nursing status
  - Males antler size



- Fit adult deer with collar (12 oz)
  - GPS location every 3 hours for 2 years
     Data stored on the collar
  - Radio signal to locate the deer/collar
- Fit fawn with expandable collar (3 oz)
   Radio signal used to locate the fawn
- Signal changes if deer dies







- Check radio signals weekly  $\rightarrow$  survival
- Monitor crop type & growth stage in ag fields



- After 1 year:
  - Recapture collared deer
    - Record same measurements
    - Release

- Capture and collar another 30 fawns

- After 2 years:
  - Recapture collared deer
    - Record same measurements
    - Remove collars and release

- Analyze deer movement data
  - Seasonal patterns
  - Differences between sex and age
  - Movements related to crop
     type and growth stage







