

# Establishing Perennial on Previously Irrigated Lands

How to make informed choices  
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# New Way of Thinking!...!

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- # New Agricultural Environment
  - # Different Equipment
  - # Change in Productivity
  - # Long Term
  - # Sustained Yield
  - # Low to Moderate Returns
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# The New Land Environment

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## # Soils

- Lower Organic Matter Content
- High Free Nitrogen
- Low Soil Porosity
- Loss of Soil Aggregates

## # No Cover

# Approaches to Establishing Perennials

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## # Modify the Environment

- Add Organic matter
  - Create Nitrogen “Sink”
  - Increase Porosity
  - Create Cover
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# Methods for Modifying Environment

## # Till in High Carbon Substrates

- Sawdust
- Straw

## # Plant Annual Crop

- Sudan, Oats, Triticale

## # No Fertilizer!!!

## # Weed Management

# Choices of Perennials

## # Assessing Your New Environment

- Precipitation – How much , When
- Soil Texture
- Salinity
- Water Table

## # What Use?

- Livestock Grazing
- Wildlife
- Seed Production

# Appropriate Choices of Plant Materials – Dryland Only

<b>Loamy Soils</b>	<b>Sandy Soils</b>	<b>Salty Soils</b>
<p>Wheatgrasses- Newhy, Pubescent, Western, Crested</p> <p>Regar Meadow Brome, Pauite Orchardgrass, Sideoats Grama, Switchgrass</p> <p>Big Bluestem</p>	<p>Switchgrass, Sand Bluestem, Western wheatgrass, Little Bluestem, Yellow Indiangrass</p>	<p>Wheatgrasses- Tall, Western, Pubescent</p> <p>Alkali Sacaton,</p>
<p>Legumes- Alfalfa, Sainfoin</p>	<p>Legumes- Alfalfa, Sainfoin</p>	<p>Legumes – Alfalfa?</p>

# Appropriate Choices of Plant Materials

## –Suppl. Water/ Water Table

<b>Loamy Soils</b>	<b>Sandy Soils</b>	<b>Salty Soils</b>
<p>Wheatgrasses- Newhy,            Pubescent, Regar            Meadow Brome, Pauite            Orchardgrass,            Switchgrass            Big Bluestem</p>	<p>Switchgrass, Sand            Bluestem, Western            wheatgrass, Little            Bluestem, Yellow            Indiangrass</p>	<p>Wheatgrasses- Tall,            Western, Pubescent            Reed Canary Grass,            Garrison Creeping            Foxtail            Alkali Sacaton,</p>
<p>Legumes- Alfalfa,            Sainfoin</p>	<p>Legumes- Alfalfa,            Sainfoin</p>	<p>Legumes – Alfalfa?</p>



# Management Sequence

## # Year One

- Plant Annual Crop
- Manage Weeds
- Till in Organic Matter

## # Year Two

- Plant Annual Crop
- Manage Weeds
- Till in Organic Matter
- Plant Perennials in Fall

# Management Sequence cont.

## # Year Three

- Manage Weeds
- Manage Weeds
- Manage Weeds
- Be Patient!
- Do Not Fertilize

## # Year Four

- Be Patient!
- Monitor Stand
- Begin Moderate Grazing Use w/ Designed rotation

# Conclusions

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- # This is Not! A Short Term Program
- # Sustained Productivity and Returns are Probable... If the Proper Steps are Taken
- # This is a Long Term Investment with low Short Term Returns