Food Security and Rangelands

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New Project

How much food from rangelands?
How much will production change over time due to different environmental stresses or policy changes?
Preliminary Estimate

Census of Agriculture information from NASS for Wyoming

Lots of assumptions
- Time spent on rangelands
- Amount of rangeland
- Grazing season
Model of Food Production

- Invasives
- Climate
- Fire
- Land use
- Water use
- Water
- Plants
- Forage quality and quantity
- Public Land Policy
- Kg per hectare
- Livestock
- Demand for Meat
- Population increase
- Income increases
Ecological Provinces
Time on Rangelands

% from Rangelands

Percent of Province

Black Hills Coniferous Forest  Great Plains - Palouse Dry Steppe  Intermountain Semi-Desert  Southern Rocky Mountain Steppe - Open Woodland - Coniferous Forest - Alpine Meadow
Wyoming Sheep and Lamb Sales From Rangelands

- Black Hills Coniferous Forest
- Great Plains - Palouse Dry Steppe
- Intermountain Semi-Desert
- Southern Rocky Mountain Steppe - Open Woodland - Coniferous Forest - Alpine Meadow

Number Sold

- 2002 Number
- 2007 Number
Wyoming Precipitation and Sheep and Cattle from Rangelands

The graph illustrates the precipitation and livestock numbers in Wyoming from 2000 to 2010. Precipitation is measured in inches, and livestock numbers are expressed in thousands. The graph shows the following:

- **Precipitation** (inches): The y-axis represents the precipitation levels, ranging from 0 to 16 inches.
- **Livestock Numbers (1,000)**: The x-axis represents the calendar years from 2000 to 2010.

Key data points include:
- The 5-Year Running Average is represented by a yellow line.
- The 1895-2010 Average is represented by a green line.
- Calendar Year data is represented by a red line.
- Cattle data is represented by a black line.
- Sheep data is represented by a green line.

The graph highlights the following trends:
- A significant decrease in precipitation and livestock numbers around the year 2002.
- An increase in precipitation and livestock numbers starting from 2005.
- A comparison between different average levels and year-specific data.

This graph provides a visual representation of how precipitation and livestock numbers have changed over the specified period in Wyoming.
Indicators can tell us about change over time
Assessing the indicators can help understand causes
Overlay environmental or policy changes

Food Security

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Questions

http://sustainable.rangelands.org