



**"For The Land And Its People"**  
North Dakota State University

# Annual Forage For Beef

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# A Cooperative Effort of DREC, HREC and SARE

- **The question was:**
- **Can we replace small grain crops grown for grain with annual forages in the northern plains and do it profitably?**
- **The answer is:**
- **Under the system we used it was not profitable, however the experiment raised some interesting possibilities.**

# What We Did

- Summers of 2000 and 2001
- 26 paddocks seeded with annual crops
- Grazed the forage with yearling heifers
- Measured forage production, animal performance and economic returns of the system
- Compared these results to traditional use of the land

# Crops Grown

- Millet (Siberian)
- Annual Alfalfa (Nitro)
- Millet/Alfalfa
- Barley (Haybet)
- Sweetclover
- Millet/Sweetclover
- Field Pea (Arvika)

# Forage Production

- Ranged from 3980 to 6782 pounds per acre at grazing start.
- After 28 days of grazing, forage left ranged from 3306 to 5782 pounds per acre.

# Estimated Expense per Acre By Crop and Harvest

<b>Crop</b>	<b>Grain</b>	<b>Hay</b>	<b>Graze</b>
Barley	87.95	65.16	54.24
Millet	70.08	63.78	52.86
Mill/Clover	NA	67.31	56.39
Mill/Alfalfa	NA	82.12	71.20
Clover	NA	61.86	50.94
Alfalfa	NA	76.02	65.10
Pea	82.19	70.34	59.42

# Livestock Grazed

- We grazed yearling beef heifers both years
- Animals went on at approximately 950 lb.
- Initial price was set at \$75/cwt.
- Final price was \$70.75/cwt.

# Animal Production

<b>Crop</b>	<b>Animal Wt. Gain</b>
Barley	99
Millet	97.7
Millet/Clover	105.7
Millet/Alfalfa	83.9
Clover	84.4
Alfalfa	81.1
Pea	52.85

# Estimated Net Returns

Crop	Production	Results	Potential???
Barley	99	\$20.01	\$94.26
Millet	97.7	\$20.42	\$93.69
Mill/Clover	105.7	\$22.89	\$102.16
Mill/Alfalfa	83.9	(\$8.28)	\$54.65
Clover	84.4	\$12.36	\$75.66
Alfalfa	81.1	(\$4.28)	\$56.55
Pea	52.85	(\$19.78)	\$19.86

# Questions Raised

- Can we reduce costs without harming future production?
- Can we increase forage production without raising costs?
- Can we capture more of forage produced?
- Can we hold this forage till a different time with out extensive harvesting losses and costs?